



Energetica
Planning advice
PA2023-04
January 2023

Energetica Planning Advice 2023

Energetica is a long-term programme that seeks to create a world-class development corridor, located along a coastal strip from Aberdeen to Peterhead. In 2007 Aberdeenshire Council, in association with Aberdeen City Council and Scottish Enterprise proposed a vision for the area as an internationally recognised location of choice for high value energy organisations and other niche organisations. Elements of the vision are promoted in the National Planning Framework 3.

Aberdeen City and Aberdeenshire Councils work collaboratively with Invest Aberdeen to deliver Energetica. As part of the Energetica vision Aberdeen City Council and Aberdeenshire Council published Supplementary Guidance and Planning Advice to focus on delivering the best designed developments to complement the corridor. The advice promotes development that enhances quality of life and promotes high environmental performance, and sets the conditions for economic growth. The Energetica vision also aims to blend our rich heritage, energy and natural resources to create a world-class destination that will attract people and businesses to live, work and invest. In line with the vision, it encourages developers to be innovative in design, create unique businesses and leisure activities and high-quality residential developments that are built on low carbon technologies.

Since its inception Energetica has provided the context for discussions with the development industry to deliver innovative and well-designed developments and has played a role in attracting many investment opportunities. Major developments such as Peterhead Port Expansion and the improvements to the A90 from Balmedie through Aberdeen to the southern markets are levers for connectivity that play a big role for the wider economy value of the Energetica Corridor. Development such as The Event Complex Aberdeen (TECA) and the Trump International Golf Course demonstrate that the area can perform on a global stage. Significant investments have been undertaken to inform the general public and visitors about the Energetica vision and increasing the quality of amenities in the area such as walking and cycling routes. Further major business opportunity sites within Energetica are currently under consideration.

The planning advice, first published in 2012, continues to provide a useful and transparent guide to the vision of good design and sustainability that the two Councils had for the Energetica Corridor. It remains as valid today as when it was first published, as an aspirational model for the kind of places that we would like to see created to achieve the global destination called Energetica.

Energetica

Aberdeen City and Aberdeenshire Councils, in association with Scottish Enterprise and other stakeholders, support the Energetica project, as promoted in the National Planning Framework 3. Within the Energetica area, as defined on the attached map, development must make a contribution to the quality of life, environmental performance and economic development targets. This contribution will result in the transformation of the Energetica area into a high quality lifestyle, leisure and, ultimately, a global business location showcasing the latest energy and low carbon technology.

We will approve development in the Energetica area, subject to other policies, if:

- 1. It is demonstrated through mix, use and design of structures, that innovation and experimentation have been employed in the pursuit of the highest levels of economic, social and environmental sustainability; AND**
- 2. It is demonstrated that the energy performance has been carefully considered in the design process and has resulted in buildings and layouts which have exemplary energy performance or introduce innovation in this regards; AND**
- 3. Buildings demonstrate future-proofing through flexibility in their design to allow for easy extension and/or conversion to other uses over the full life-span of the building; AND**
- 4. It is demonstrated that the layout and design of buildings promotes the creation of social hubs, civic spaces, streets as places and active frontages within developments; AND**
- 5. It is demonstrated that the implementation of open space requirements emphasise the aspiration for active lifestyles within the area; AND**
- 6. There is a commitment to the provision of high quality landscaping which contributes to a unified sense of place within the area.**

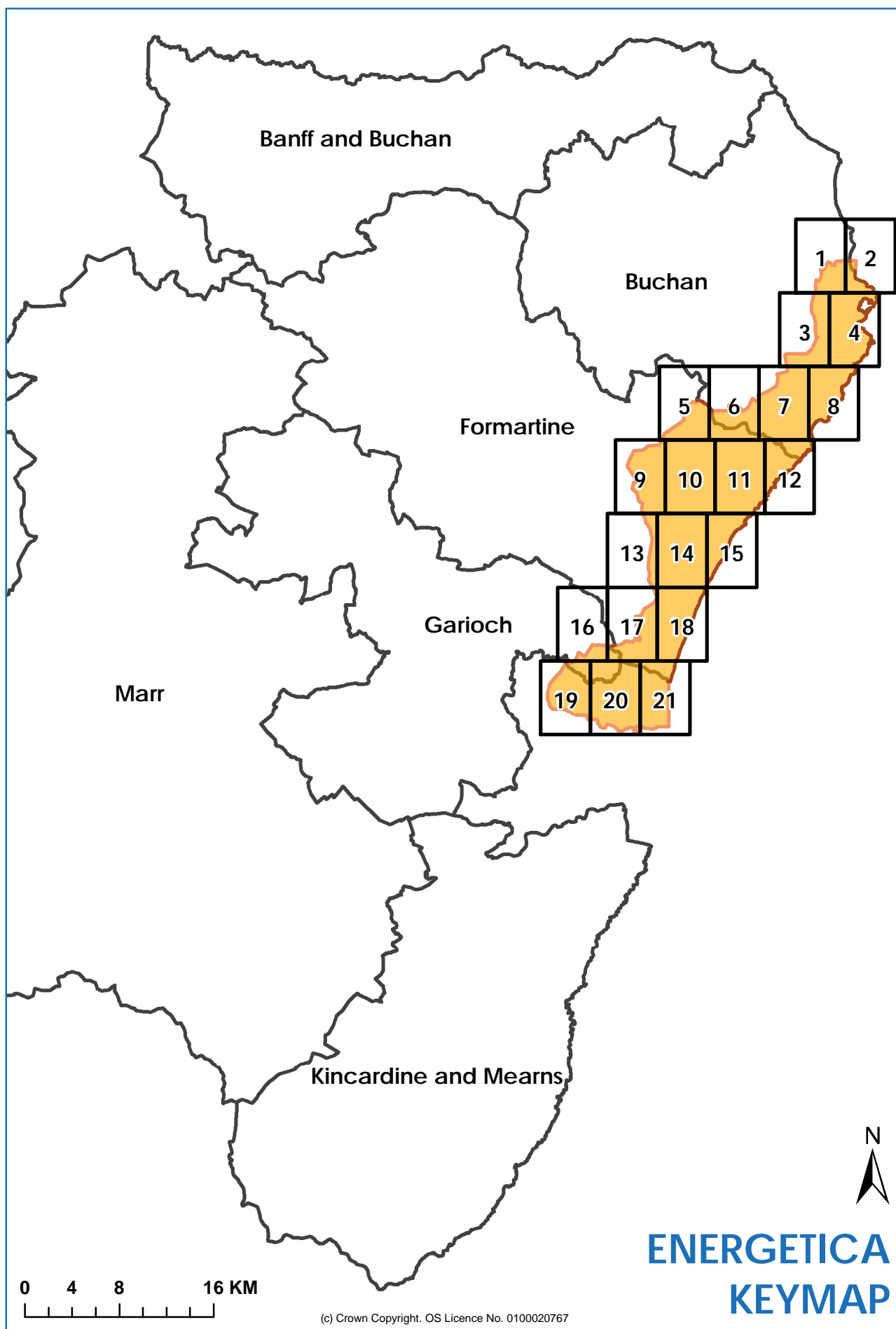
Planning applications for major developments will be required to provide an Energetica Compliance Statement to demonstrate that the above criteria have been fulfilled to the satisfaction of the planning authority. This may be included as part of the documents within a design set*. Planning applications for local developments are also encouraged to provide Energetica Compliance Statements.

Planning advice is published as a guide to achieving these specific requirements. This advice also sets out appropriate responses to meeting other, more general, planning policy requirements.

Aberdeen City and Aberdeenshire Councils accept that the scale of contribution made by the development to Energetica should be proportionate to the scale of the development proposed. Where documents are subject to an agreed masterplan or other design document, these should translate Energetica aspirations into layout and design of new developments to ensure a coherent identity in the Energetica area. It does not apply to householder planning applications, advertisement consent or planning applications of an agricultural nature. It is recognised that many of the planning and design actions required to achieve this ambition are common for all developments across Aberdeen City and Aberdeenshire. In addition it is expected

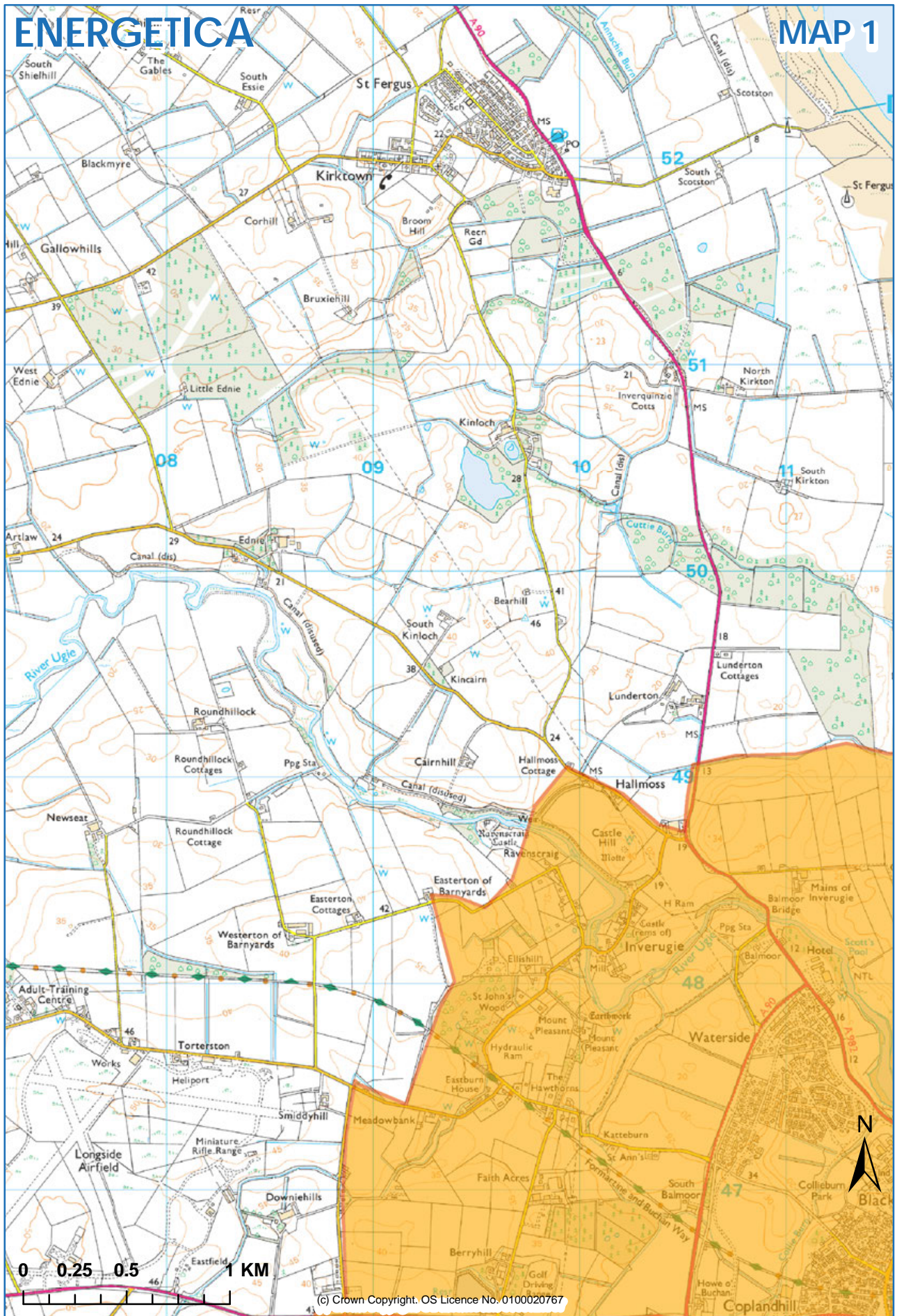
that development in the Energetica area will lead by example on issues such as: the mixture and co-location of facilities to create business villages; environmental sustainability and performance; landscaping and greenspace management; travel; and built form.

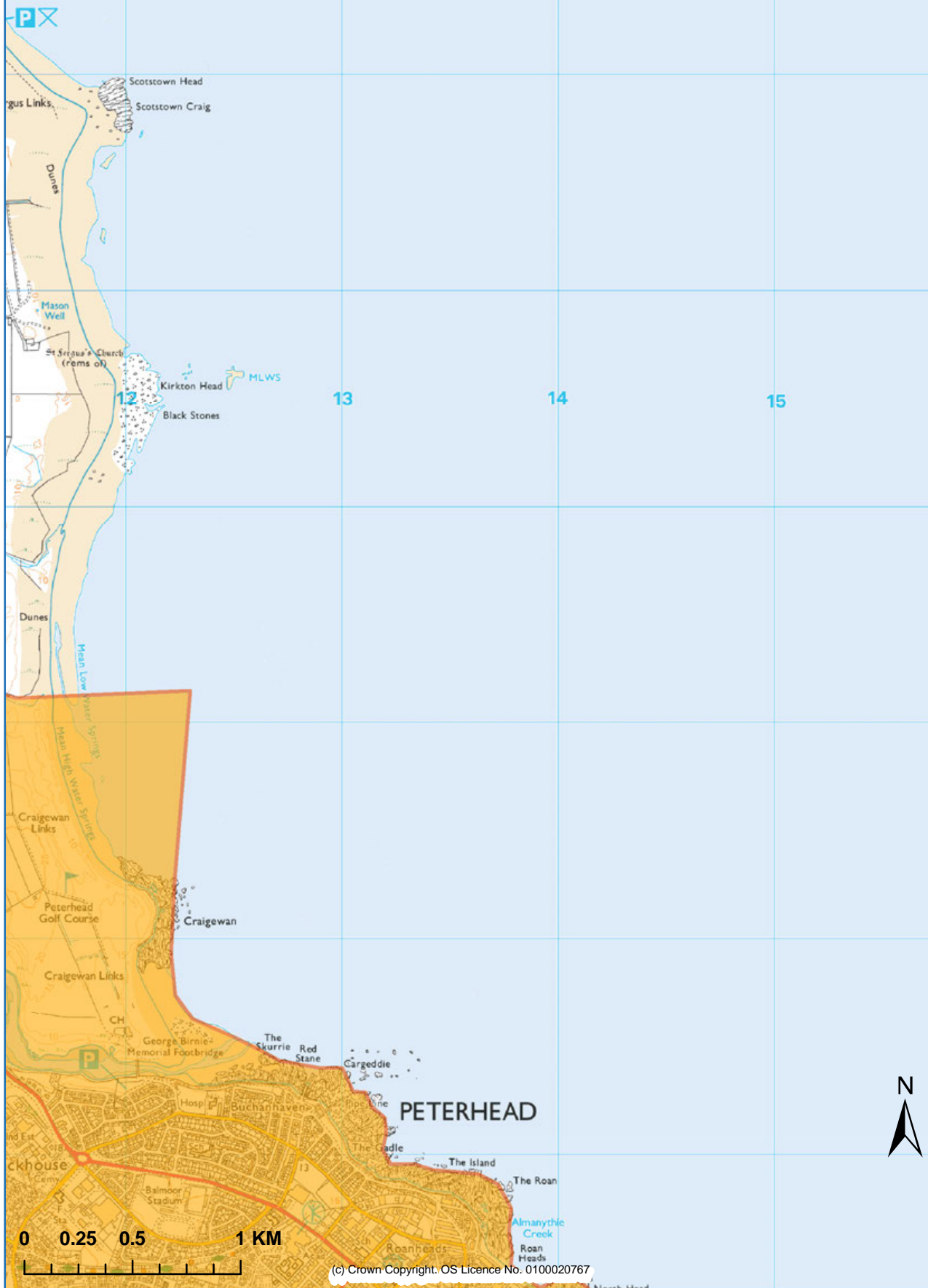
* A design set is a set of design documents including any Frameworks, masterplans design briefs or pattern books prepared for a development site

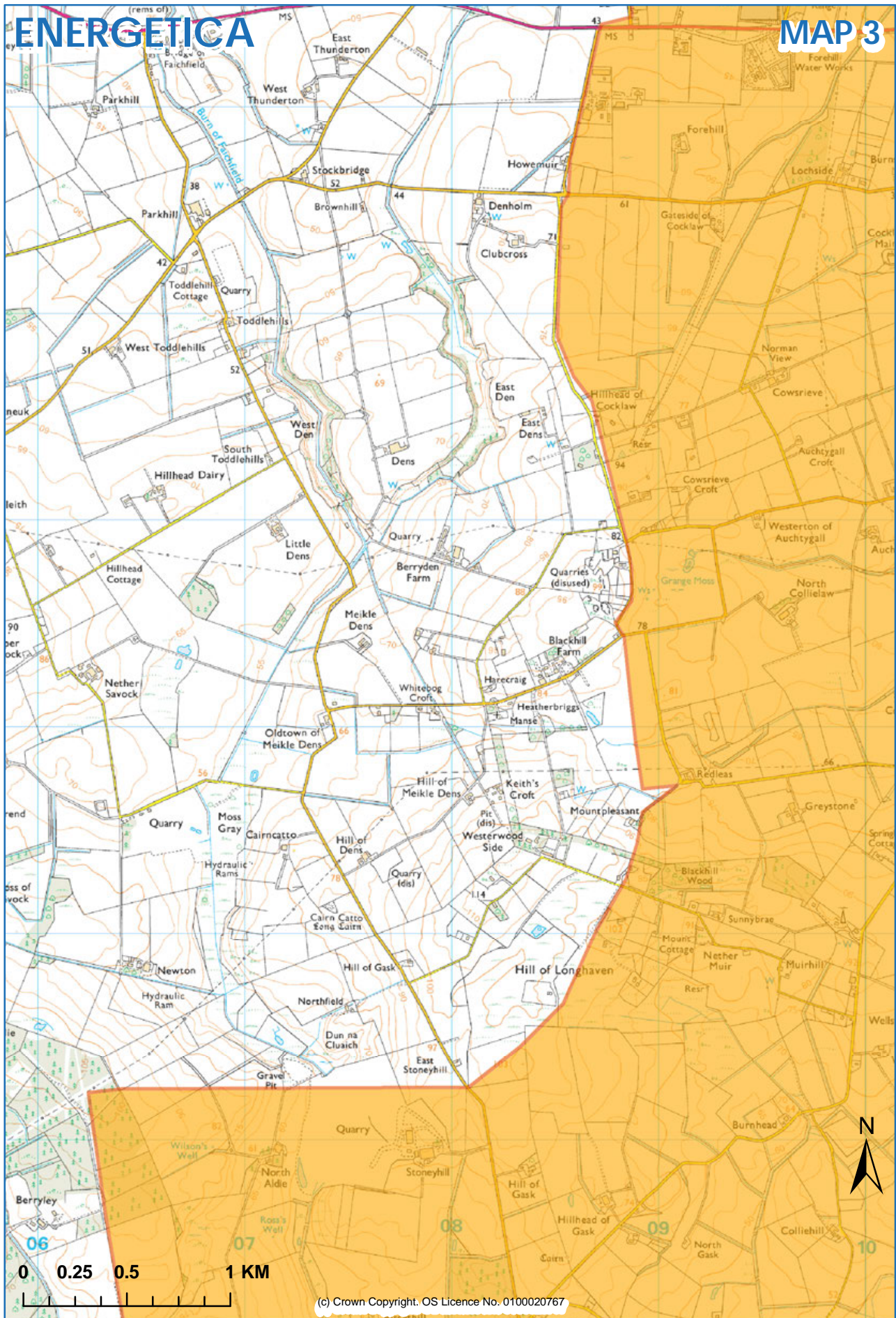


ENERGETICA

MAP 1

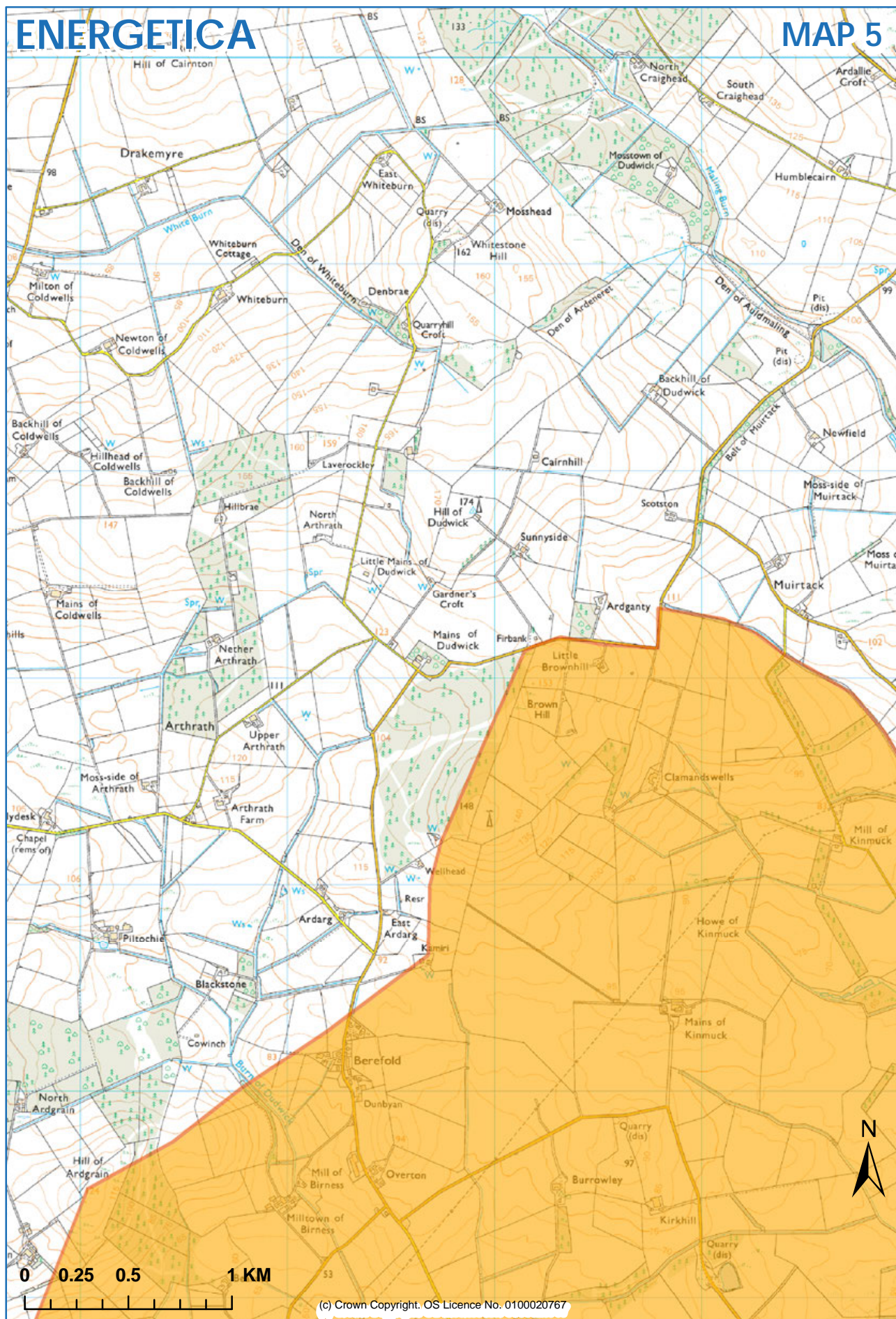


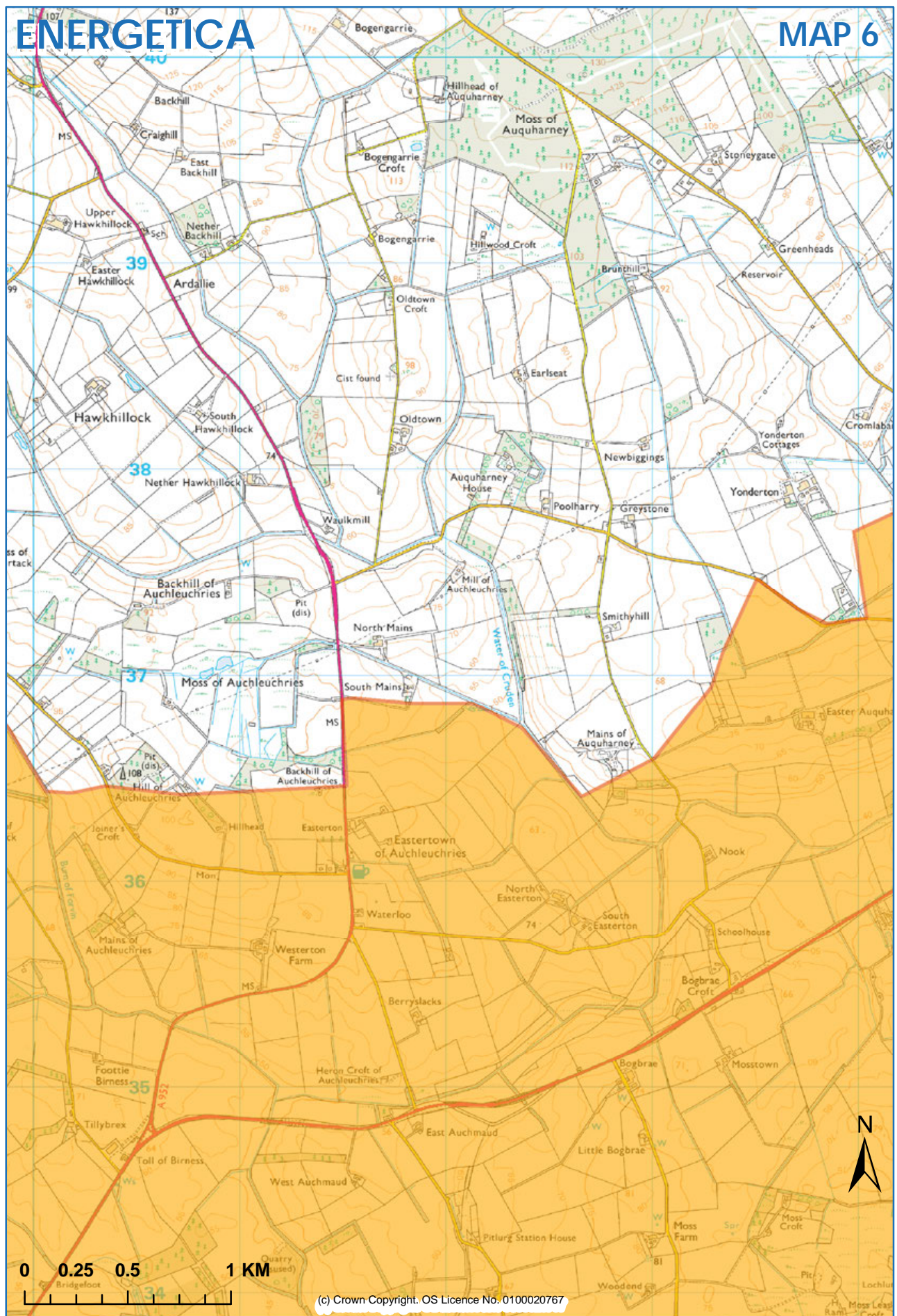


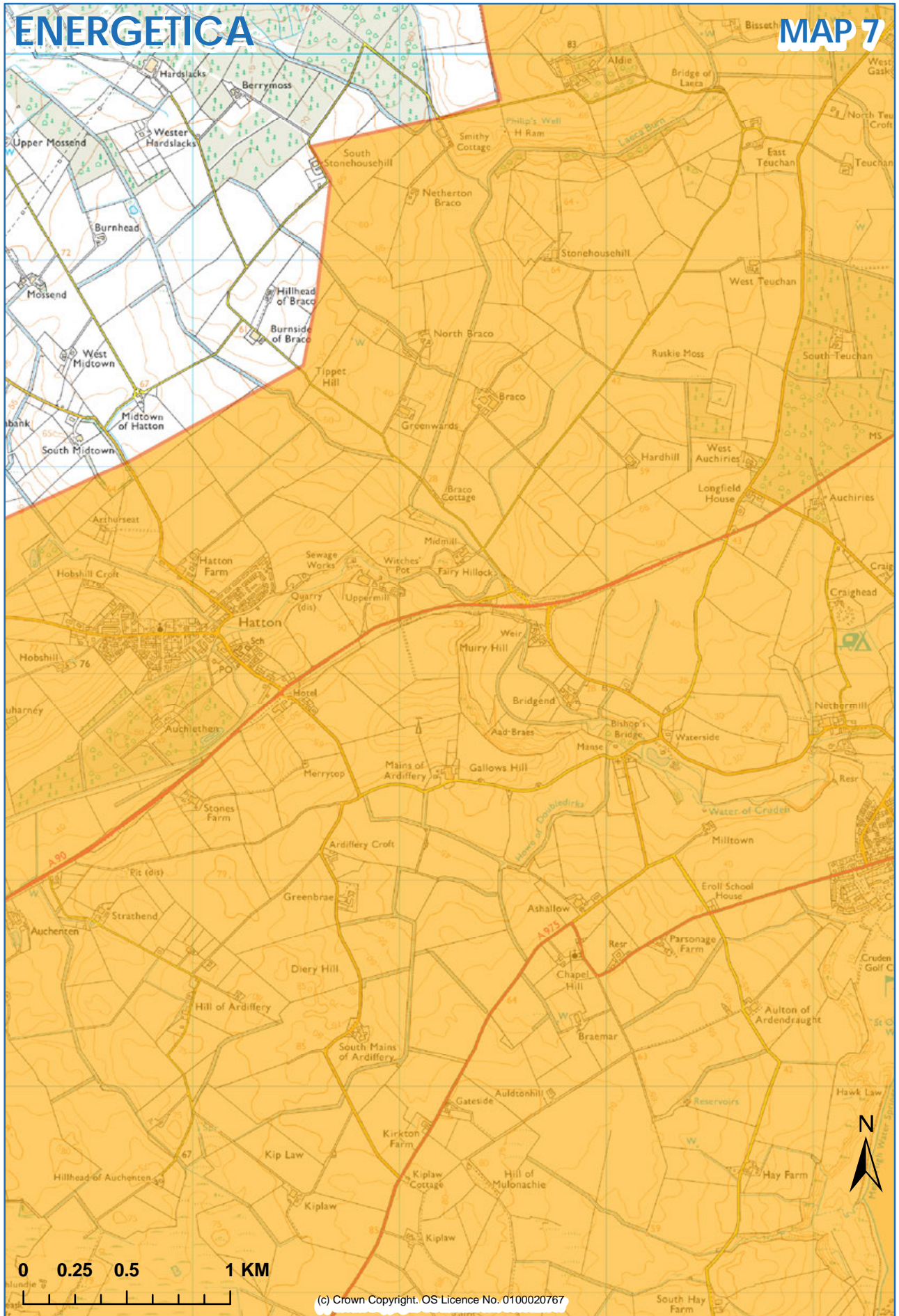




MAP 5



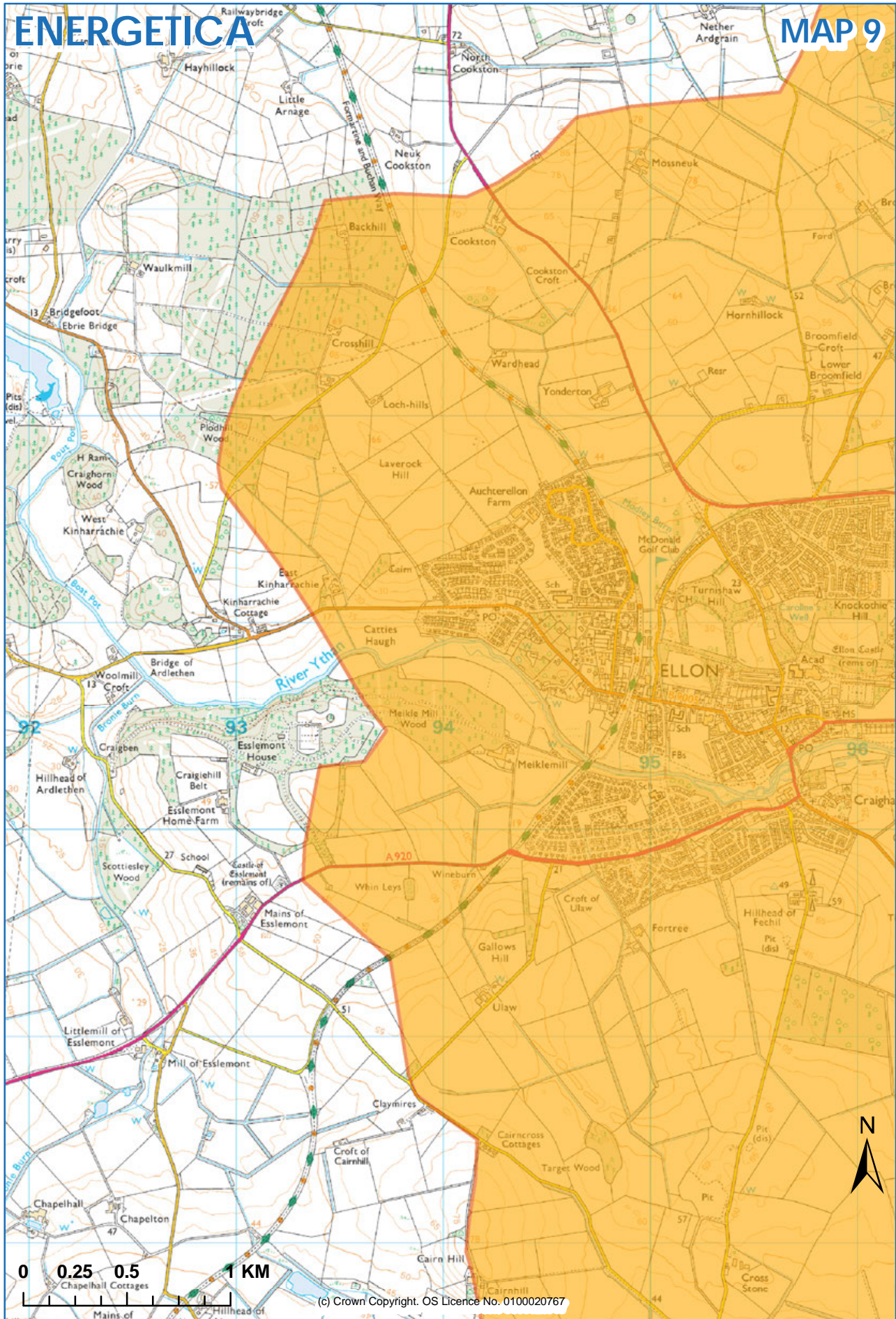


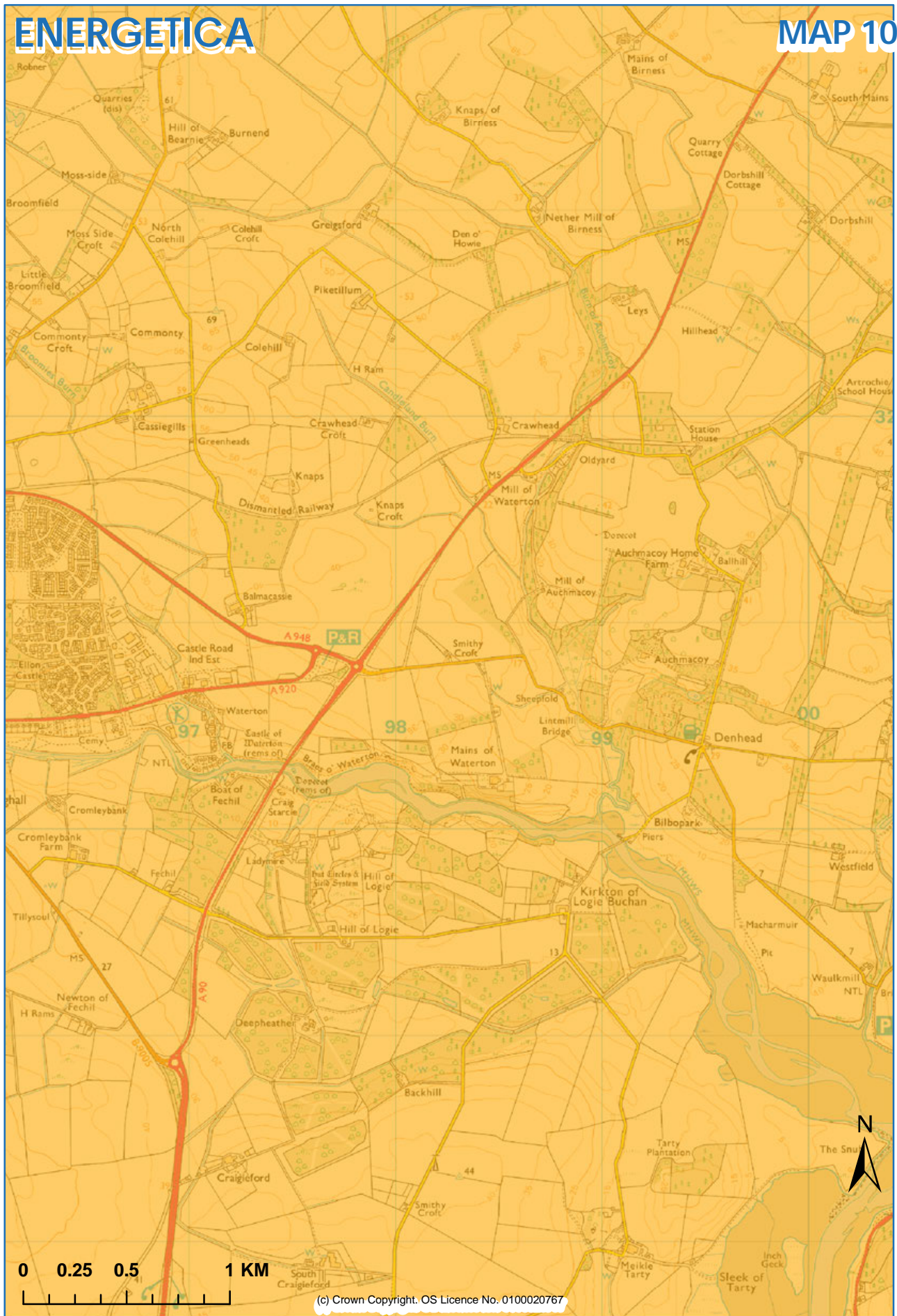


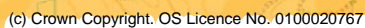
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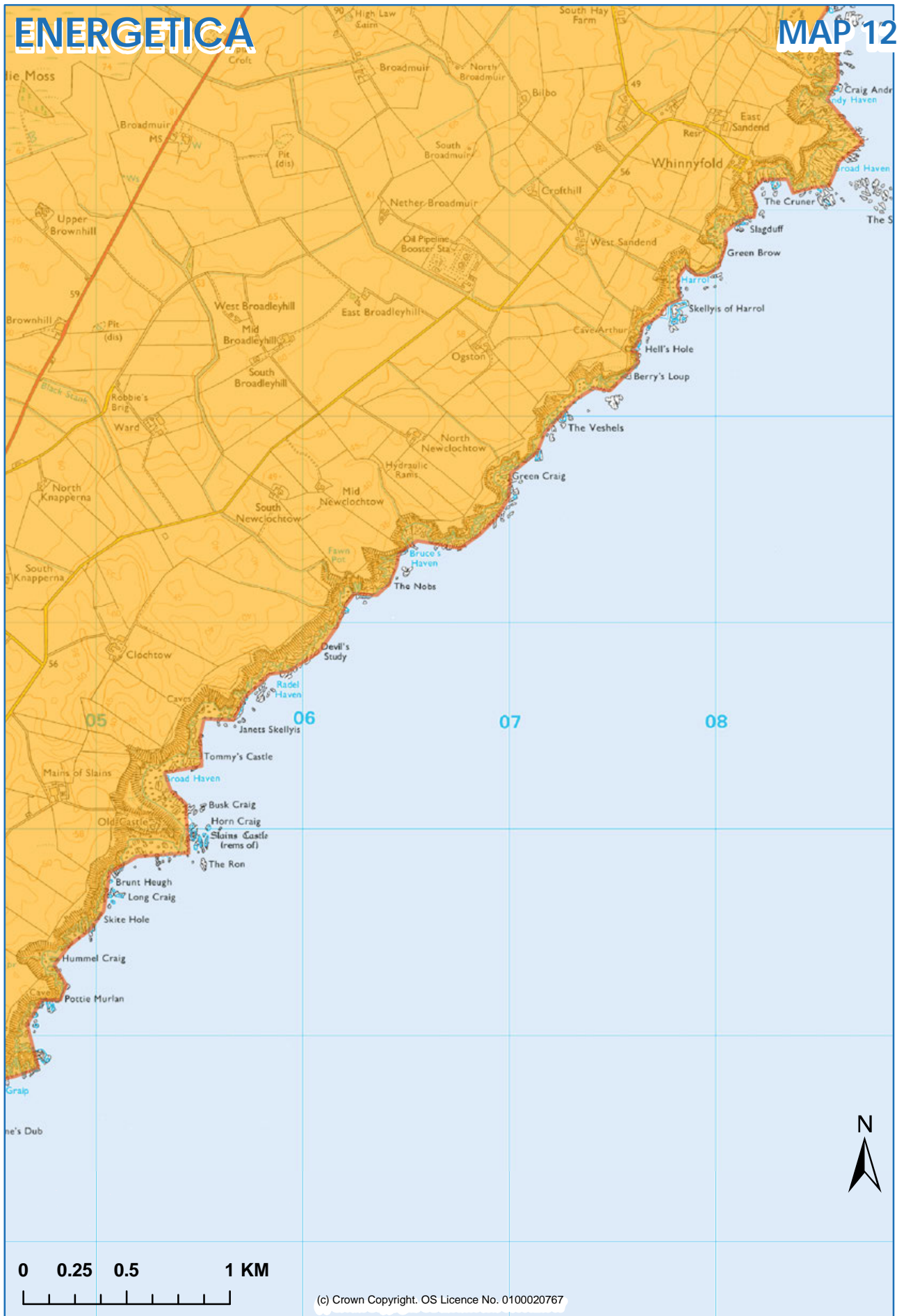
MAP 8

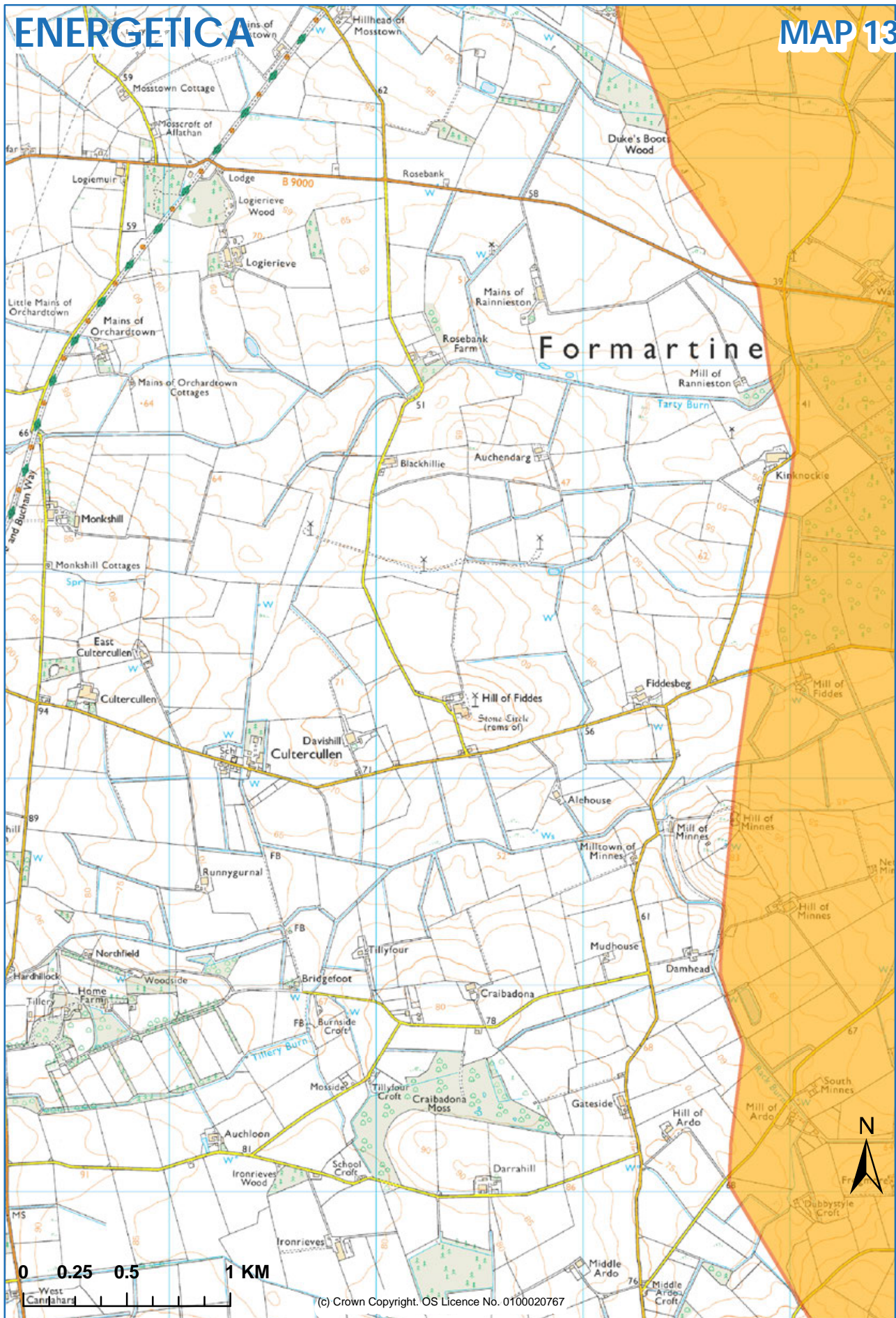


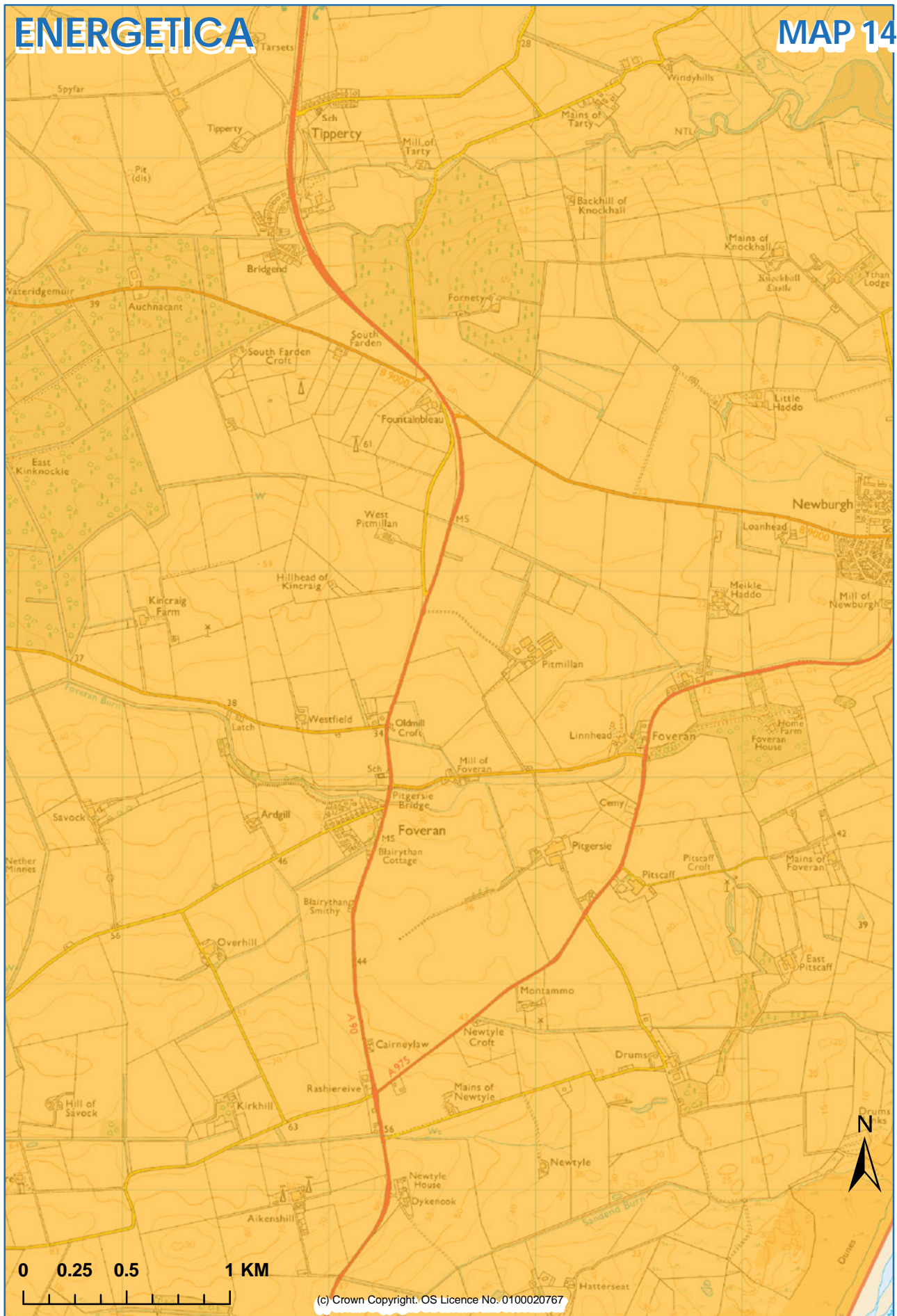




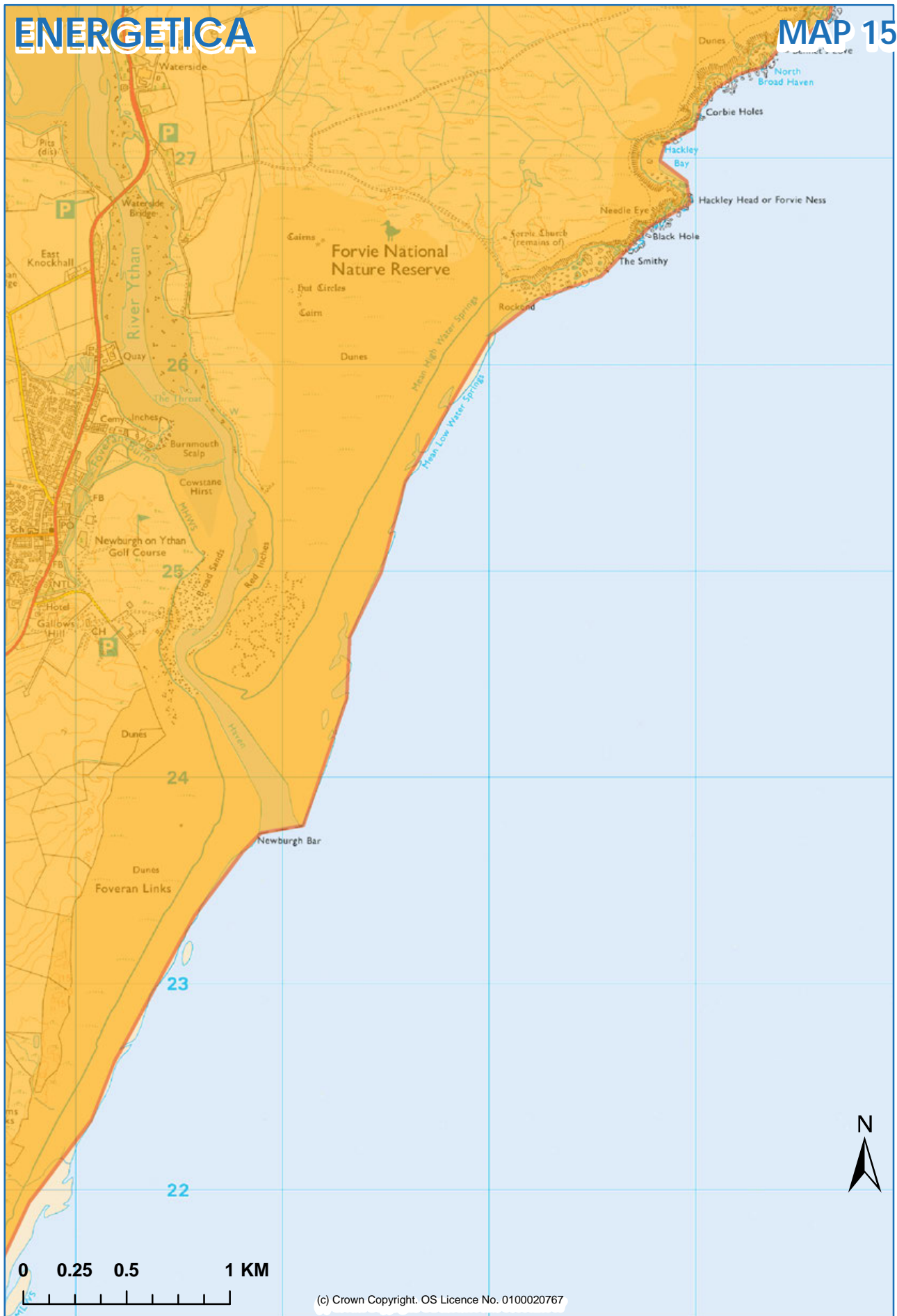








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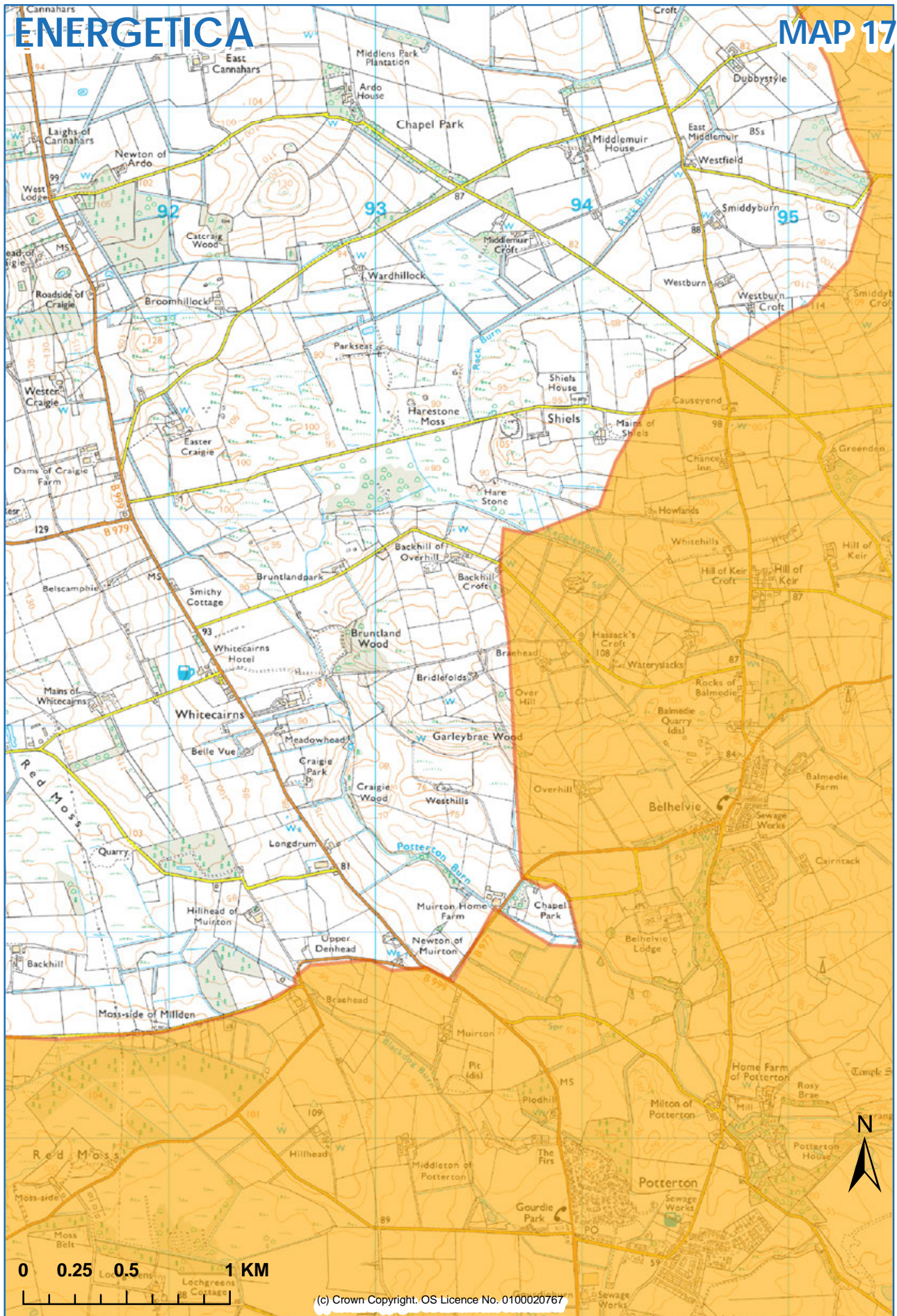


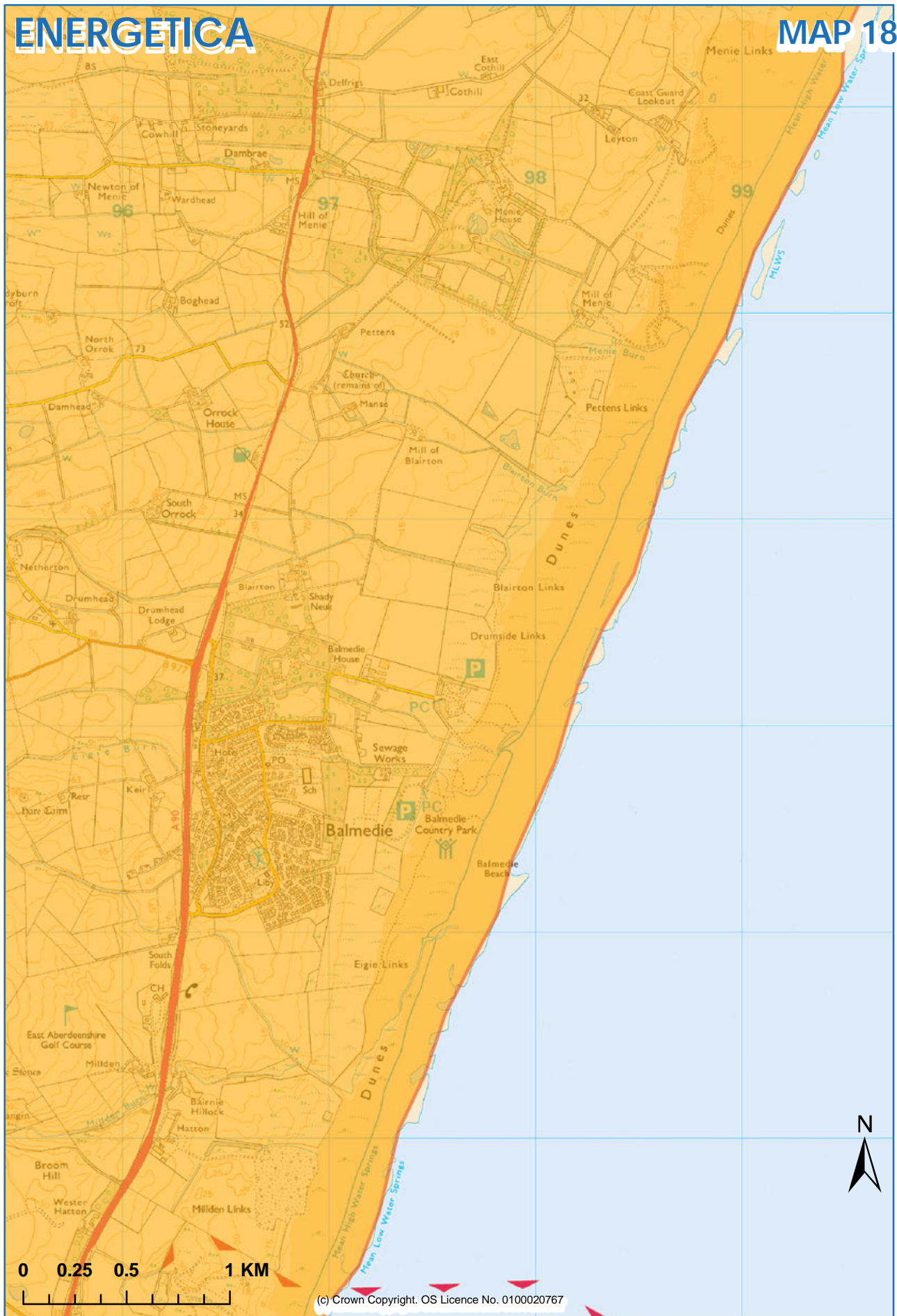
MAP 16



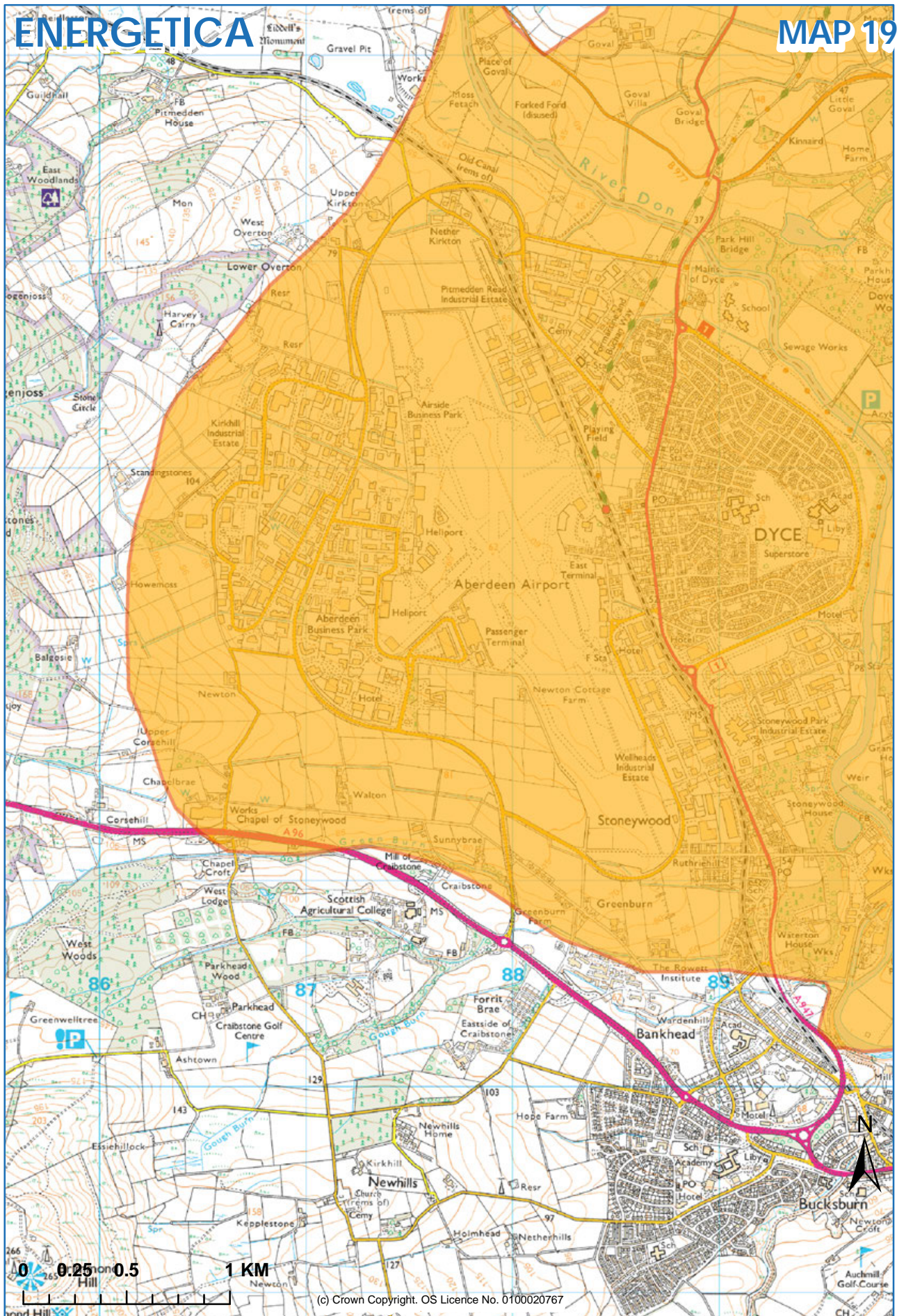
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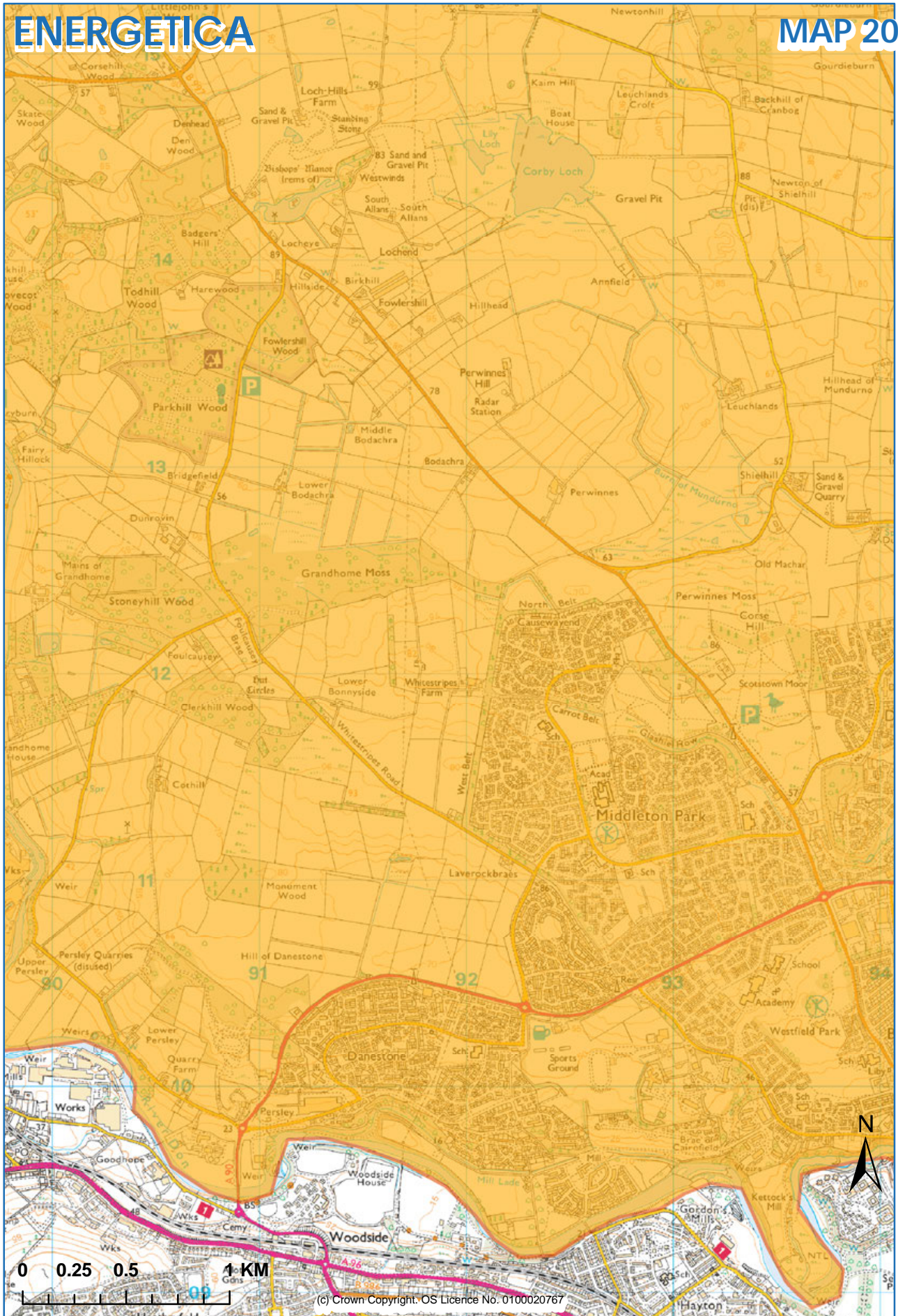
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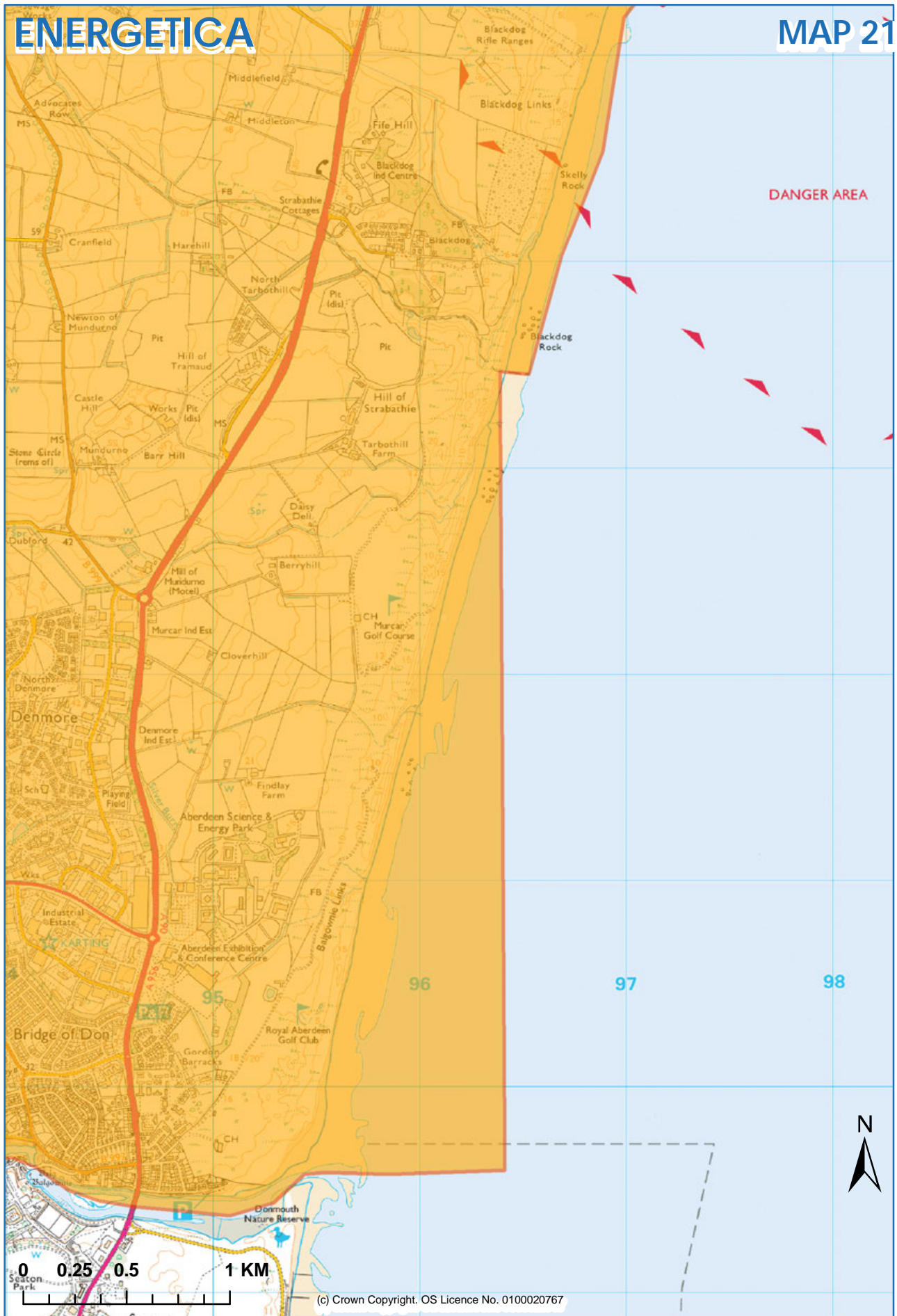




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FOREWORD



Aberdeen City and Shire has been truly blessed with natural resources upon which the region has built an enduring success story, moving from traditional industries of fishing, farming, paper and granite to offshore oil and gas and now into renewable energy. The natural environment along our coast-line has some of the most dramatic and out-standing scenery and wildlife in the country.

Energetica aims to blend our rich heritage, energy know-how and natural resources to create a world-class destination that will attract people and energy businesses to live, work and invest. Based on low carbon principles, Energetica will seek to develop and showcase energy technologies and a way of life that leads the way in energy efficiency and sustainability. Energetica will cement our position as a global energy hub.

Energetica aims to create a unique business, leisure and residential destination built on low carbon, highly sustainable principles, capable of competing with the best locations in the world. This will involve:

- attracting business founded on and inspired by the energy industry
- design criteria that promote sustainability and has low energy requirements
- high quality, low emission energy efficient buildings for business and residential use
- sympathetic development that enhances the natural environment
- radically improved transport arteries that make use of low emission technologies

To deliver a world-class energy destination, we have to be innovative, creative, dynamic and sustainable in all our thinking.

This starts at the planning stage. If we are to design and build the highest quality, lowest carbon developments that will be exemplars around the world, we have to have robust planning policies in place to ensure developers achieve these goals and to enable public authorities to have the courage and confidence to keep faith with the vision.

The Supplementary Guidance and this supporting Planning Advice document outline Energetica's design principles. Our aim is to translate the vision into clear, concise planning guidance. The Supplementary Guidance details the policy that will provide the key differentiators between the Energetica corridor and other areas of Aberdeen City and Shire. As planning policy, developers will be required to demonstrate how they have incorporated Energetica's principles into their design.

The Energetica Planning Advice sits 'behind' the Supplementary Guidance and is advisory rather than policy. Our Planning Advice takes a holistic approach to place making, providing recommendations on a wide range of subjects from local food production to density patterns. We will be encouraging all development to adopt these principles which we feel will ensure high quality placemaking and energy efficient buildings in attractive landscaped settings.

We appreciate that initially these requirements will be challenging for developers and that they must also be commercially viable but the aim is to work together to create a truly world-class environment of which we, and future generations, can be proud.

The project has already evolved rapidly securing major early successes including a £9million investment in the Innovation and Energy parks, the inclusion of Energetica in the Structure Plan and Local Development Plans, the acquisition of land at Peterhead for a new industry park and substantial investment at Peterhead Port. We hope that these exciting documents will provide the foundation for further investment in this inspirational project.

Professor Stephen D Logan

Aberdeen City and Shire Economic Forum

Energetica

1.0 ENHANCING THE QUALITY OF LIFE

The original Energetica Strategic Framework (November 2008) described a future area in which economy, environment and quality of life combine to produce a new 'lifestyle' corridor. There are numerous factors that need to be present to ensure the Energetica corridor is a desirable place to live, key among them are:

- access to quality education
- social offerings such as places to meet or entertainment venues
- openness or how welcoming a place is
- the area's physical beauty and green spaces

The guidance aims to improve quality of life by focusing on creating vibrant places within communities where groups of people can interact.

While location and place are important qualities, technological advances and increased mobility may diminish their importance in the future. But location will still matter. Face-to-face contact, meeting people and opportunities for joint innovation are more desirable than ever and so every opportunity should be taken to enrich social and physical infrastructure. There is also a strong relationship between quality of life and environmental performance through the provision of better living and working environments. Given that the landscape of the Energetica corridor is a considerable asset and a key factor in the quality of life of the area this guidance will promote and encourage involvement with the landscape either actively through care and production such as farming, fishing or forestry or passively through education and community projects.



Creating opportunities for public use of and participation in the landscape is also a key factor so that greenspace development can become more process driven. At the same time, the more general aims of improving access to the countryside, encouraging active lifestyles and promoting schemes that enhance the character and identity of the corridor have a clear connection with the quality of life in the area.

Set out below are the principles of the advice.

LANDSCAPE AND GREEN SPACE:



Energetica will focus on maintaining or enhancing the quality of the landscape of the corridor by:

- reducing urban sprawl and the uptake of productive land and habitats by concentrating development in existing settlements
- using the landscape as a resource for settlements including providing construction materials, fuel and food and other low energy options
- improving biodiversity in the corridor through planting native species and creating new habitats
- encouraging roadside biodiversity by sensitive maintenance regimes
- encouraging farms to diversify into broader types of cultivation including forestry, woodland, biodiversity and energy crops
- suggesting that settlement extensions should relate to the form of the existing town or village and to its immediate landscape setting
- improving roadside parking areas through biodiversity programmes and new habitat

creation, linking these into corridor-wide networks of footpaths and habitats

In terms of green space, the following elements should be considered:

- establishing green spaces that link together to creating an informal network of places to enjoy – these will include parks, gardens, woodland, green corridors, wildlife sites, areas for flood risk management, open spaces, watercourses, street trees, gardens and the open countryside
- provision of spaces suitable for a wide range of activities - such as formal and informal recreation, nature conservation, food production, walk and cycle ways, education – as an integral part of new development
- providing opportunities for communities to create their own green spaces – allotments, woodlands, recreational facilities

MOVEMENT NETWORKS:

Ease of getting about and good connections to local services are basic requirements not only of neighbourhoods and settlements but also of wider sub-regional areas. Communities rely on movement, so Energetica will seek to apply the principles of Designing Streets ensure that new development:

- is orientated to or designed around existing public transport routes
- gives priority to pedestrians and developments designed to reduce traffic speeds
- includes a public transport plan focused on the hearts of settlement
- provides clear walking routes to public transport facilities including cycle routes, safe routes to schools and road crossings
- provides a network of routes and public spaces to help create communities that includes all residents
- considers the use of gravel or similar surfaces which facilitate absorption of rainwater and reduce vehicle speeds for general access roads

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- orientates towards existing roads instead of creating a new access to 'deep' sites
- creates walkable neighbourhoods especially in relation to existing centres and facilities

DENSITY PATTERNS:

Careful consideration of density can enhance everyday life by improving convenience, access to schools, work and to public transport. Energetica will promote appropriate density by :

- differentiating between city / town / village centre-style environments, density patterns should mirror or exceed traditional pattern
- encouraging higher densities by clustering buildings close to public spaces and transport routes
- encouraging developers to leave a proportion of sites as community greenspace to enhance the area's biodiversity or as agricultural land
- considering lower densities at the edges of settlements, especially where usable, green or food producing open space is provided, especially where further expansion is not anticipated and where useable, green or food producing open space can be provided



EXISTING CENTRES AND FACILITIES:

Successful and attractive centres are key components of the Energetica experience. All new development should aim to strengthen these by considering the following:

- all communities must have access to local education, healthcare, leisure and community facilities appropriate for their size

- new development can help enhance existing facilities to create clusters and improve critical mass
- mixed use employment and/or industrial areas should be orientated towards existing centres
- new developments should encourage innovative combinations of uses and facilities
- all facilities should be within a walkable distance or short public transport trip from residential areas
- a hierarchy of centres and facilities will ensure that new local provision is properly located
- alterations to existing centres and facilities should maintain their visibility and accessibility
- large developments or settlement extensions should include facilities that help meet the needs of the area, such as open spaces, crèches, day-care and health services, local pubs and other places for residents

CO-LOCATION OF NEW FACILITIES:

Successful communities are key to the quality of life in the Energetica corridor. Examples of an approach might include:

- new developments that intensify existing settlements by providing facilities that complement existing provision
- new facilities and uses that maximise social interaction and provide meeting places for all ages in the community
- use of small interventions to create sociable spaces - eg changing a road to slow down traffic
- creation of innovative and active places through consideration of potentially complementary uses such as a community centre adjacent to a health centre, a sports facility in a town centre next to retail and employment uses or a community theatre sharing facilities with a school
- providing day-long activity in the public realm by breaking down traditional

stereotypes of uses and their locations – for example a sports centre or a bowling green in a town centre (see Dawlish in Devon or Glenrothes in Fife), can provide customers for cafes and sandwich bars and can even part-support a taxi service

- co-location of waste recycling facilities at focal points within communities, helping to integrate this infrastructure in the settlement structure

MIXED COMMUNITIES:



Towns, villages and new developments in the Energetica corridor will have a mix of housing type, tenure and facilities that enables people to stay in one neighbourhood through different phases of their lives rather than constantly moving in search of homes which suit their changed lifestyles. These neighbourhoods will also provide many opportunities and facilities for meeting and socialising. Factors that will help communities grow and prosper include:

- locating new development to promote the growth of mixed communities, with the appropriate mix based on local need, demand assessment and democratic debate
- clearly outlining what is expected from prospective developers - local authorities should specify the percentage and location of different tenure and procurement types (setting minimum standards for a percentage of plots for alternative procurement such as individual and community / collective procurement and/or self-build)
- larger development sites should be broken up into a series of block structures of between 5-10 homes in order to allow a diversity of developers such as local building companies or collective self-build groups to foster local character and distinctiveness

- proposals should demonstrate variety in building types to facilitate choice: single family homes (including homes for young families), flats, granny flats and other accommodation for the elderly, including a proportion of wheelchair access homes
- as far as possible the tenure of housing should not be discernible from its design, quality or appearance. Whilst mixing tenures within one building may not always be possible, this can be achieved through continuous urban design across the whole site, for example by sharing the same street, with facing front doors, and good linkages to surrounding services including public transport.
- co-locating certain age groups such as homes for young families with play facilities for under-5's with accommodation for the elderly has particular advantages

INTEGRATING INDUSTRIAL ENVIRONMENTS:



New and existing business, industrial and working environments are an integral part of Energetica's towns, villages and countryside, providing employment opportunities but also giving that important 'buzz' to community centres. To maximise the benefit that business presence brings, all development should integrate planned street infrastructure, the co-location of public realm and shared facilities, landscape design and the placing of building entrances towards the street. Issues to consider include:

- giving preference to the restructuring of existing industrial employment areas over the development of new sites
- the approach from Designing Streets is recommended for industrial areas, in creating an urban realm which avoids introverted, hidden and limited access areas

- the location of employment in either industrial or non-industrial employment zones should be based on an assessment of environmental hazard factors so that non-industrial employment can be mixed with residential accommodation
- employment buildings should be orientated towards the street - this will help to create a coherent building line, public functions (entrances, canteens, meeting rooms) should face the street, facades should enable transparency and overlook the street
- considering additional storeys as a means of maximise site efficiency and density wherever possible, while ensuring flexibility of operations and future expansion
- organising parking of cars and other vehicles so that it does not dominate the streetscape
- the landscaping of industrial zones should pay attention to the potential for biodiversity and quality of experience by following the guidance of this document – eg regarding green infrastructure, green roofs, verges, SUDS etc
- creating informal meeting spaces such as cafes, sports and other leisure facilities, bike storage, smart work centres and work-hubs – these can be shared by different users, including industrial tenants and external visitors, such spaces can function as transition zones between industrial and other urban areas

- car and bike-share options which are optimised by design in terms of access, parking and encouraging reserved or preferential shared car parking facilities
- including shared parking space, eg well designed multi-storey car parks that can also be used by employment and leisure functions or underground car parking
- including industrial parks in innovative enabling infrastructures such as shared grids, energy controllers and other initiatives

INTEGRATING OTHER WORKING ENVIRONMENTS:

If environmental nuisance factors do not dictate otherwise, mixed use functions should

be encouraged, integrating office workspace and certain light industrial / warehousing functions with uses such as healthcare, education, leisure, sports and residential into the everyday fabric of the towns and villages through a good quality public realm. In addition to the factors identified in the previous sector, elements to consider include:

- the location of employment land should be based on an assessment of environmental hazard factors, so that non-industrial employment can be mixed with residential use
- non-industrial business uses should be integrated into residential areas or, if they are too large for successful inclusion, in mixed use employment / residential zones
- buildings should be designed to be as flexible as possible so that they can be adapted over time to meet the changing needs of the community, for instance from employment to residential use or vice versa, as well as creating residential buildings with larger sizes
- when designated mixed use employment areas a maximum percentage of residential plots should be specified

INNOVATIVE ENABLING INFRASTRUCTURE:



Towns and villages in the Energetica corridor should become exemplars of innovation in community facilities, work and communication, governance, information, and energy reduction models aided by state-of-the-art and continuously evolving digital tools. This is particularly important in overcoming locational disadvantage by allowing communities to flourish by being connected, through living sustainable lifestyles and by reducing the need to travel. This also helps to create an

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empowered region in which residents and businesses contribute to innovation. Factors to consider include:

- the development of a series of SWCs (smart work centres) as part of residential, employment space and leisure developments - these are office / workspace centres of varying sizes in close proximity to residential communities, providing spaces for workers and catering for both individuals and groups with extensive use of information technology
- the development of distance learning tools within secondary and higher education
- the development of an online / handheld personal travel assistant system across the corridor, allowing people to find the most efficient travel route in terms of cost, time, energy efficiency
- the development of a smart service delivery network allowing public service staff to desk-share and access remote servers within the Energetica corridor
- the development of an Energy Controller¹ system allowing members of the public and those who manage energy consumption at broader levels to gain an insight into and acquire a degree of control over urban energy consumption by establishing limits, responding to alerts, and even participating in competitions based on energy savings. Such a system would enable a wider community understanding and view of electricity, gas and water consumption and production throughout the corridor
- the development of an intelligent food production, delivery monitoring and management system which would enable sharing of resources and result in greater efficiencies
- the development of a system allowing

residents to alert authorities to maintenance and repair needs via mobile phones such as 'SeeClickFix' or 'FixMyStreet'²

HERITAGE AND THE REUSE OF EXISTING ASSETS:



Development proposals within the Energetica corridor should demonstrate how they maintain or enhance the built and natural heritage of the area, or carry on the traditions that helped to create the corridor's distinctive landscape. Elements that should be considered include:

- communities should participate in local character assessments which define what they consider to be valuable, creating a baseline for new development
- the environment of the corridor is fundamentally changed by small increments - development proposals should detail exactly what is proposed in terms of new planting, boundary treatments and management
- planting of native species in traditional patterns is a prerequisite of any development proposal in the rural area
- particular attention should be paid to the guidance in relation to A Positive Relationship to Landscape (01/1) and Green Settlement Patterns (01/3)

- proposals for the area must pay due regard to the Landscape Character Areas and to the recommendations for maintenance and management proposed by SNH
- development proposals should aim to increase community involvement, such as managing part of the landscape, undertaking new hedgerow planting, shelterbelt or woodland planting, creating new habitats and constructing stone walls
- enhancement of the setting of heritage features, using them as orientation points to create compelling places
- the reuse of abandoned buildings and structures such as churches, cottages and farm buildings for residential use or as community hubs and workspace where appropriate in terms of LDP policies
- heritage should be viewed as the transmission of skills as well as the preservation of physical monuments or landscapes



EXEMPLARS

Chiswick Park, London
<http://www.enjoy-work.com/>

Dagenham Dock, Sustainable Industrial Park
<http://www.barking-dagenham.gov.uk/Regeneration/Dagenham/Pages/DagenhamDock.aspx>

Basketbar Utrecht
http://www.archined.nl/oem/reportages/basketbar/basketbar_e.html

22@ District, Barcelona
<http://www.22barcelona.com/index.php?lang=en>

¹ An Energy Controller system is part of a smart grid, a form of electricity network using digital technology. A smart grid delivers electricity from suppliers to consumers using two-way digital communications to control appliances at consumers' homes; this could save energy, reduce costs and increase reliability and transparency if the risks inherent in executing massive information technology projects are avoided. The "Smart Grid" is envisioned to overlay the ordinary electrical grid with an information and net metering system, that includes smart meters. Smart grids are being promoted by many governments as a way of addressing energy independence, global warming and emergency resilience issues

² FixMyStreet is pioneered by mysociety.org and is a web and mobile based service which enables members of the public to locate and photograph maintenance issues and report them directly to Council departments then monitor progress on their repair

2.0 ENVIRONMENTAL PERFORMANCE



INTRODUCTION

Development in the Energetica Corridor is being planned with awareness of a number of major global challenges – climate change, global population increasing to 9 billion by 2050, oil and gas demand escalation, water stress and rapid technology advancement. The scale of the challenges faced has led the UK Government Chief Scientist, Professor John Beddington, to warn that by 2030 (the end of the proposed Energetica development timetable) we may well be facing a perfect storm of resource shortages and rapidly rising prices for petrol, gas and food.

In terms of Climate Change the Scottish parliament has already implemented an ambitious carbon emissions reduction strategy setting legally binding targets that will see an 80% reduction in carbon emissions by 2050 and an interim carbon emissions reduction target of 42% by 2020.

The Aberdeen City and Shire Structure Plan has set a target for all new buildings to be carbon neutral by 2016.

No large scale, long term development plan such as Energetica can ignore these challenges.

APPROACH TO IMPROVED ENVIRONMENTAL PERFORMANCE

Energetica wishes to shift away from the usual focus purely on building performance to one that also places emphasis on lifestyles and infrastructure in order to deliver a high quality, high performance living environment.

To achieve this Energetica is adopting two overarching strategic targets relating to carbon emissions reductions and ecological footprint reductions in the Energetica corridor.

- a carbon emissions reduction of 80% by 2050 (and an interim target of 42% by 2020). This is already a legally binding target of both the Scottish and UK Government's, introduced in response to the threat that Climate Change presents to the future well being of our society. However, as yet, very few development projects have adopted these targets as a core aim.
- an ecological impact reduction target of 66% for new developments. Global population is rising rapidly and forecast to reach 9 billion by 2050. It is currently estimated that, globally, we are consuming 25% more renewable resources than the planet can replenish and this rate of consumption is forecast to increase significantly as emerging economies such as China, India and Brazil expand and develop. Different countries consume at different rates but ecological footprinting analysis suggests that, in the UK, we need to reduce our ecological impact by around 66% if we are to play our part in keeping global impacts within tolerable levels.

The adoption of these targets promotes a comprehensive approach to new development in the corridor because carbon and ecological impacts arise from a wide range of inputs. So, for instance, the CO2 emissions of an average UK resident can be broken down across a range of factors - each of which will need to be addressed if a target reduction of 80% of emissions is to be achieved. These factors include - Housing Construction (8%), Home Energy (23%), Transport (23%), Food (8%), Consumer Goods (13%), Government (8%), Business (10%) and Capital Assets (7%). A similar breakdown can be identified

for the ecological impacts of an average UK citizen and together with the CO2 emissions breakdown provide a map of the key issues that need to be addressed in order to meet the targets.

DESIGN AND DELIVERY

The guidance sheets provide the detail on how significant carbon emission reductions and ecological impact reductions can be achieved at the relevant spatial scales of neighbourhood and plot and cover energy, construction



materials, transport, food, waste and water. Set out below are key points to consider in each category, suggested resources for further reading (many of the resources are relevant for more than one category but are not repeated in each separate category) and case studies.

ENERGY

All new developments will be designed and built to reduce demand for energy and provide options for supplying the remaining demand from renewable sources, the following points should be considered where appropriate:

- application of an energy hierarchy approach to site-wide energy solutions and detailed option appraisals using thermal masterplanning methods



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- exploration of potential partnerships with renewable Energy Service Companies energy providers and alternative utility delivery vehicles as well as resourcing efficient delivery of energy solutions – ie Combined Heat and Power or District Heating Systems
- maximising the proportion of renewable energy supply – through smart grid and combined on and off site solutions, consideration of solar gain and wind ingress mitigation, building orientation and glazing solutions
- maximising thermal performance and airtightness of all buildings on the site, building retrofit options into new buildings to allow for connection to renewable energy solutions over time and considering the use of super energy efficient appliances, lighting and real time energy consumption meters in all buildings
- minimising of cold bridging¹ at the detailed design stage

SUSTAINABLE CONSTRUCTION



Design buildings to last and be suitable for deconstruction and re-use at the end of their lives, including making the best use of resources already available around the site. The following should be considered:

- a site appraisal that includes information on existing infrastructure and its capacity together with an assessment of alternatives such as minimising the need for new infrastructure provision such as site roads, substations and drainage as well as maximising the utilisation of existing infrastructure

¹ Cold bridges are elements of the fabric of a building that have significantly lower thermal resistance than the rest of the construction

- local sourcing of materials for buildings and infrastructure, designing buildings to last with easy change of use and efficient use of materials
- source materials with low embodied energy and using products from certified sources – ie FSC timber and which score highly on the Green Guide to Specification

SUSTAINABLE TRANSPORT

All new development should seek to achieve or contribute to reducing reliance on fossil fuel based transport, private car use - especially for short journeys - and promoting walking and cycling, the use of public transport and car clubs in the corridor. The following should be considered:

- mixed use development on the site will allow people to live and work within walking/ cycling distance
- local shops and services should be sited no more than a 400m walk from any home and provide adequate sheltered cycle parking
- a green transport strategy for the development should detail how reduced carbon intensive travel to and from the site is to be achieved
- integrate attractive regional cycle and walking routes in new urban extensions or clusters of new facilities and ensure priority is given to walking and cycling over vehicles
- maximise access to low carbon public transport and to the wider public transport network – creating attractive public transport waiting places with bus stops

integrated in the public realm

- consider provision of a subsidised car club open to both residents and the surrounding neighbourhood
- reduce the road infrastructure in the development and provide shared surfaces as part of design of the development and prioritise the road network in the development in accordance with Designing Streets
- minimise car parking throughout the development and prioritise cycle parking, car club / car sharing and clean energy vehicles at commercial centres
- provide electric car charging points in homes and workplaces

LOCAL FOOD PRODUCTION

Energetica is keen to respond to the global challenge of addressing the inefficiencies in the food system and facilitate people growing their own food. The following should be considered:

- provide space for individuals and groups to grow a proportion of their own food in locations that have been assessed for sunlight, irrigation and soil quality. Provide attractive community greenhouses, allotments, gardens, window boxes, space around buildings and grow bag schemes as part of the public realm experience
- promote self-funding social enterprises based around food to help promote local food production and appropriate environmentally friendly growing practices. Provide expertise for residents to call on



when they wish to grow their own food

- promote on-site businesses to sell local produce, establish a local food network to link local food outlets with local producers and provide space for a farmers market
- encourage a productive public realm so that a range of planting is considered on public areas and promote local composting schemes for homes and businesses, include composting facilities in the layout of homes and gardens
- encourage a range of local food retailers so that residents can shop on a daily basis for fresh food rather than relying on one weekly food shop which contributes to wastage – and link this to schools, hospital and the procurement and distribution network



RECYCLING AND WASTE STRATEGY

All proposals should minimise the amount of waste arising from new developments both during and after construction. The following considerations should be kept in mind:

- provide a covered re-use area at a local community centre for people to swap items and promote good waste management practices to both householders and industry through awareness and behavioural change campaigns
- providing for recycling in public spaces and on 'regular routes', making this part of the placemaking strategy through attractively designed local facilities – also provide communal recycling facilities for groups of small shops and businesses and enable and encourage recycling from households and businesses so that all seven priority materials are separately collected from any waste not intended for recycling

- explore the potential for industrial symbiosis at appropriate sites with provision of premises for businesses that want to take advantage of recycling and re-use business opportunities
- consider appropriate sites for advanced incineration technology / anaerobic digestion facilities (but minimising methane emissions from the latter) and reduce transport-related emissions by using/ locating waste infrastructure facilities close to source/on-site and with regard to end-use
- early liaison with the local authority on collection choices and how these may impact upon the options for other waste infrastructure including providing adequate interior and exterior space for waste storage and collection
- implement a Site Waste Management Plan to reduce by a significant proportion the amount of construction waste going to landfill - potential target of 80% reduction
- separate clean wastes at source to increase the likelihood of closing the recycling and new product manufacture loop
- on site composting can be conducted by residents and other small-quantity generators of organic waste on their own property - by composting these materials onsite, homeowners and select businesses can significantly reduce the amount of waste that needs to be disposed



AN INTEGRATED APPROACH TO WATER

Water is a precious resource and as far as possible developments should limit any increase in demand for water and minimise the need for additional reservoirs. The following items should be considered:

- provide sustainable urban drainage systems (SUDS) incorporating - green roofs, rainwater harvesting, permeable pavements, swales, natural watercourse corridors, wetlands and ponds, and incorporate these as positive part of placemaking / biodiversity strategy and build in long term management arrangements for SUDS.
- consider a local ecological sewage treatment system where linking to a main sewer is not possible or is too expensive
- consider site wide integrated rainwater systems and provide water efficient taps, showers and WCs together with rainwater re-cycling systems and water butts, water efficient appliances and water meters for new building

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3.0 SETTING THE CONDITIONS FOR ECONOMIC GROWTH

INTRODUCTION



Energetica aims to offer a unique business environment that will generate the conditions for a step change in innovation, dynamism and inward investment, around its existing energy industry and beyond. Sustainable economic development depends on setting the right conditions for the growth of new organisations and the expansion of existing firms that can add value to the economy through their activities be they technological advancements, job creation or social value.

Continuous improvements in productivity are vital to securing long term competitiveness in an increasingly global economy. In mature industries where obvious growth strategies such as employing more staff or working longer hours no longer produce significant increases in productivity, innovation is key. Energetica will adopt a comprehensive approach to place making that encourages businesses to interact, collaborate and share knowledge, ideas and resources. This focus will set the conditions for existing businesses to flourish, for new firms to be attracted and create an innovation environment that is deeply intertwined and linked to key Scotland-wide policy ambitions such as talent attraction.

THE ROLE OF PLACE-SHAPING FOR INNOVATION

There is an extensive and growing body of literature, from both a academic and policy context, on how physical place-shaping can help to set the conditions for growth and

innovation – alongside a host of other factors such as business support, skills development, institutional linkages, legal and fiscal policies, and infrastructure.

Models of innovation usually fall into three categories:

- innovation driven by the structured research and development undertaken in existing firms and research institutes such as universities and other public sector institutions
- the less structured innovation by (groups of) individuals that often leads to new firm formation. According to the National Endowment for Science, Technology and the Arts (NESTA), whilst most innovation takes place within firms, the disruptive innovations of ‘bedroom entrepreneurs’ should not be underestimated – stories abound of how individual entrepreneurs have revolutionised our way of life through new technologies.
- distributed innovation derived from user-based and peer-to-peer networks is getting increased attention as a source of innovation - whether for new systems of commercial production, public sector reform or social innovation in the third sector, *wikinomics*¹ and an emphasis on collaborative ways of working have revolutionised how the potential for innovation is viewed

¹ The theory and practice of harnessing the power of mass collaboration

A diverse, resilient and inclusive economy needs all three types of innovation to underpin competitiveness, sustainable growth, social cohesion and an improved quality of life. The Energetica corridor will strive to set the conditions for a wide range of innovation to flourish – within and between firms, through start-ups, at an everyday level, and within public services.

DESIGN AND DELIVERY:

The guidance sheets set out how the conditions for economic development can be set at the relevant scale – Corridor-wide, Neighbourhood, Plot – and through a wide range of factors. The main relationships as they impact on the Energetica Design Guidance are shown below together with key points to consider in each category, suggested resources for further reading and case studies. Key points to consider in each category are:

For the **built environment**, this means:

A focus on social spaces in and between buildings. All forms of innovation have one thing in common: they depend on the exchange of ideas, know-how and experience between people in order to facilitate processes of building knowledge, absorbing and adapting ideas of others, learning and sharing skills. The role of networks has been recognised as absolutely crucial for all three types of innovation – knowledge networks, learning networks, user feedback networks, etc.



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Partially, these are now online but place and place quality still matters to set the conditions for innovation: face-to-face, informal social exchange of ideas is crucial in building trust, exchanging tacit (as opposed to explicit) knowledge and lower transaction barriers. Density, diversity and proximity are crucial parameters for this to happen. This implies a need for the creation of informal meeting places and 'breakout spaces' within and between buildings such as:

- clustered building entrances
- good quality and well-located bus stops
- wireless cafe's
- facilities for sports and informal recreation
- public open spaces near the workplace – whether on a business park, industrial area or within the fabric of towns

- even car parks can accommodate social spaces, and allotments have been proven to add value to office developments

The value of working environments is now often between the buildings, not just within.

High quality spaces. There is evidence that good quality public spaces and a green public realm have a positive effect on the value of office and retail premises because they are more attractive to businesses both locally and globally². In many sectors, investment in public realm design quality brings quantifiable financial returns. Key factors for street design include:

- social spaces, opportunities to meet and eat outside
- tactile paving and colour contrast
- smooth, clean, well-drained surfaces
- dropped kerbs
- high-quality materials
- high standards of maintenance

² Valuing Sustainable Urbanism, 2008. Research carried out by Savills for the Prince's Foundation <http://www.princes-foundation.org/sites/default/files/0707vsuoverview.pdf>

- pavements wide enough to accommodate all users without pinch points and potential obstructions placed out of the way

- enough crossing points, in the right places

- traffic levels not excessive

- good lighting

- sense of security, e.g. encouraged by informal surveillance through active frontages

- signage, landmarks and good sightlines; spaces to sit down and rest

In addition, there is increasing evidence that fine grain connectivity³ is crucial for the economic performance of e.g. high streets, as it increases accessibility by a wide range of transport modes.

The creation of low-cost workspace is key for business start-ups. New ideas often need old buildings or cheap and flexible accommodation as easy access to space lowers the barriers for start-ups. Among the crucial elements are:

- shared workspaces such as hubs or business incubators

³ a pattern of smaller street blocks, shorter pedestrian routes between places and a dense mix of uses



- wireless cafes and community buildings that are open as workspace are crucial
- positive conditions to support working from home – such as larger homes that offer space for home-working, or shared facilities in neighbourhoods such as meeting space, printing facilities, etc.
- flexibility of use and the ability for buildings to change use is an additional element

Examples of these include:

The Hub, London:
<http://the-hub.net/places/london>

Kaap Noord, Amsterdam
<http://www.kaapnoord.nl/>

SOAR Works, Sheffield
<http://www.soarworks.co.uk/>

In terms of **Lifestyle enabling**, this means:

There has been a raft of research and evidence about the importance of attracting talent to cities and city regions. Whether it is the realisation that firms are attracted to regions with the right labour pool and dense labour markets, or the opportunity for the creation of innovative new firms or the upsurge of innovation in social value projects, talented outsiders are key. Lifestyle considerations are crucial in the decision-making process of talented people. Recent research amongst key target demographics confirm that important factors in the decision making process include:

- unique place identity
- a diverse and vibrant public realm
- access to nature and the countryside
- a flourishing night time and cultural sector

These in turn are enabled by

- a fine grain of buildings and activities
- avoiding large single use zones
- a choice of transport options including the possibility of walking and cycling

In terms of **Open source structures**, this means:

In a world where innovation is more and more user-driven, creating opportunities for end-user feedback is crucial in areas such as:

- local energy systems,
- public realm management
- food growing
- local event organising are important

All of the above present opportunities for people's ideas to trickle up and improve the quality of life. This can involve making it easy to organise events in the public realm (e.g. through electricity supply).

This should be enabled by the way the built environment is organised, in order to create a welcoming and accommodating environment.



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01 SETTLEMENT STRUCTURE

A POSITIVE RELATIONSHIP
WITH LANDSCAPE A LEGIBLE
MOVEMENT NETWORK A
GREEN SETTLEMENT PATTERN
A WELL CONSIDERED
DENSITY PATTERN A
POSITIVE RELATIONSHIP
WITH EXISTING CENTRES AND
FACILITIES A DELIBERATE
CO-LOCATION OF NEW
FACILITIES DESIGNING
FOR MIXED COMMUNITIES
THE INTEGRATION OF
WORKING ENVIRONMENTS
THE INTEGRATION OF NON
INDUSTRIAL WORKING
ENVIRONMENTS INNOVATIVE
ENABLING INFRASTRUCTURE
A POSITIVE RELATIONSHIP
WITH LANDSCAPE

04 SETTLEMENT STRUCTURE

01.1 - A POSITIVE RELATIONSHIP WITH LANDSCAPE

XL - CORRIDOR WIDE

All developments should have a positive relationship with the landscape and natural heritage so that:

1. positive linkage of the development to the countryside is implemented through development of public greenspace networks embracing cycle paths, coastal footpaths, recreational facilities and managed habitats
2. the development contributes to landscape improvements that maintain and enhance the landscape character areas in the corridor – through shelterbelts, new woodland, hedgerows and maintenance particularly around settlements
3. the development achieves a score of 75% or better in the Eco Homes BRE Ecological Value Checklist (very good or excellent) in order to encourage development of land that already has a limited value to wildlife and to discourage the development of ecologically valuable sites
4. the developer will undertake additional works offsite in an agreed location or make a financial contribution to the Energetica Development Trust, if it is not possible to achieve the maintenance or enhancement of habitats onsite

JUSTIFICATION

The key principle is that wherever possible, settlements should have a positive relationship with the landscape and natural heritage in which they should be treated as a vital living resource and an integral part of the corridor's economy, environment and quality of life.





The potential benefits of this requirement include:

ECONOMY

- supporting the local economy through food production and fuel crops
- retaining skills in agriculture, forestry and related countryside activities
- contributing to the landscape as an asset instrumental in defining the character of the Energetica corridor

ENVIRONMENT

- enhancing the character of the key landscape zones within the corridor
- improving opportunities for outdoor recreation close to homes, decreasing the need to drive
- enriching biodiversity profiles throughout the corridor and maintaining and enhancing the complex mosaic of natural and manmade habitats

QUALITY OF LIFE

- encouraging involvement with the landscape either actively through care and production or passively through education and community projects
- creating opportunities for public occupation and process driven greenspace development
- improving access to the countryside, encouraging active lifestyles and promoting schemes that enhance the character and identity of the corridor

04 SETTLEMENT STRUCTURE

01.2 – A LEGIBLE/PERMEABLE MOVEMENT FRAMEWORK

XL, M - CORRIDOR WIDE, NEIGHBOURHOOD

We will encourage new residential, mixed, industrial or employment area development to promote, provide and integrate sustainable transport modes including where possible:

1. frequent points of access into and through the development through a permeable open grid pattern are included
2. convenient and attractive direct routes for pedestrians and cyclists are created
3. improved opportunities for the provision of public transport through the area are provided
4. clear views and easy orientation which integrate elements of the built and natural heritage are ensured
5. the development includes scope for future adaption and change
6. connections into the surrounding landscape where possible and connect to existing footpaths and cycleways are created
7. the development embodies the recommendations of Building for Life, Criteria 14
8. the development embodies the principles and practice set out in Designing Streets

JUSTIFICATION

The key principle is that wherever possible, new development should promote, provide and integrate sustainable transport modes.





The potential benefits of this requirement include:

ECONOMY

- the integration of settlement structure, movement and places improves the quality of communal realm and becomes a factor in attracting people to the Energetica corridor
- a legible and permeable movement network generates the conditions for proximity, density and diversity that are essential conditions for innovation
- connectivity is a key factor in small business vitality and good quality public realm facilitates social exchange

ENVIRONMENT

- legible and permeable movement networks with good linkage to public transport and non-motorised transport modes encourages sustainable transport, reduces car use and decreases pollution, noise nuisance and carbon emissions
- convenient and pleasant environments increase walking and cycle use

QUALITY OF LIFE

- building legible and permeable movement networks as core components of settlement structures and assist in establishing place identity and creating quality living environments
- adaptable, open-ended and well connected places create positive lifestyle conditions
- well structured settlements provide opportunities for social interaction
- better connectivity at local scale creates conditions for improved safety

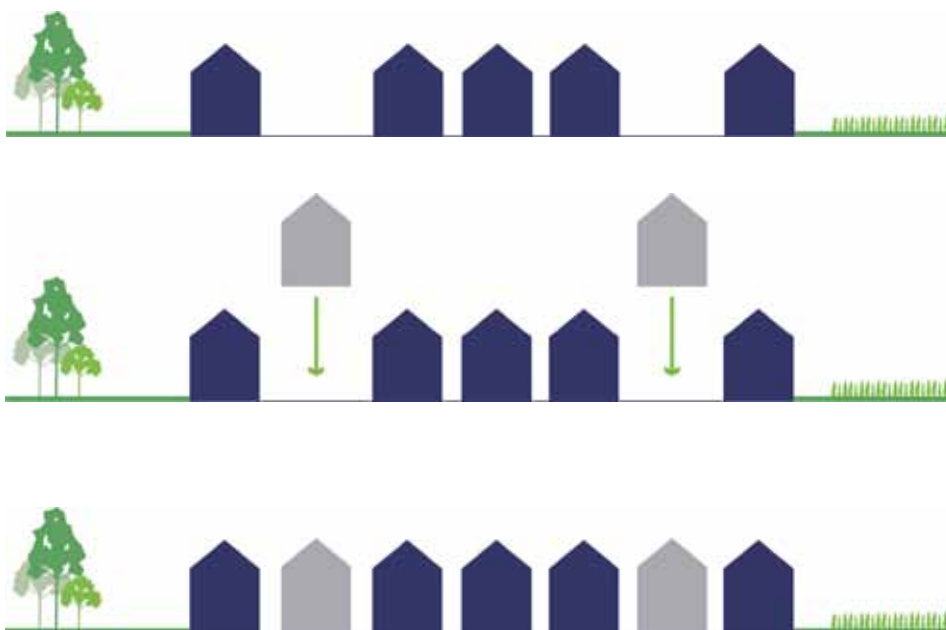
04 SETTLEMENT STRUCTURE

01.3 – A GREEN SETTLEMENT PATTERN

XL, M - corridor wide, neighbourhood

New residential, mixed, industrial, business or employment area development should create new or enhance existing green infrastructure so that:

1. new developments intensify existing settlements rather than disperse them over land which is productive or provides recreational facilities or habitats
2. settlement extensions relate to the form of the existing town or village and to its immediate landscape setting – this will often entail building in narrow linear forms along existing routes rather than in deep whole-field patterns
3. green or open spaces are established that link together to create an informal but planned network across a wide geographical area – these will include parks, gardens, woodland, green corridors, wildlife sites, open spaces, watercourses, street trees, gardens and the open countryside
4. the provision of spaces that can perform a number of different functions - such as formal and informal recreation, nature conservation, food production enhanced settings for existing development, routes for walkways and cycle ways, areas for flood risk management, an education resource – as an integral part of new building
5. in addition, there are a number of allocated sites within the LDPs on Greenfield sites and it is important that only allocated sites or brownfield windfall sites can be developed

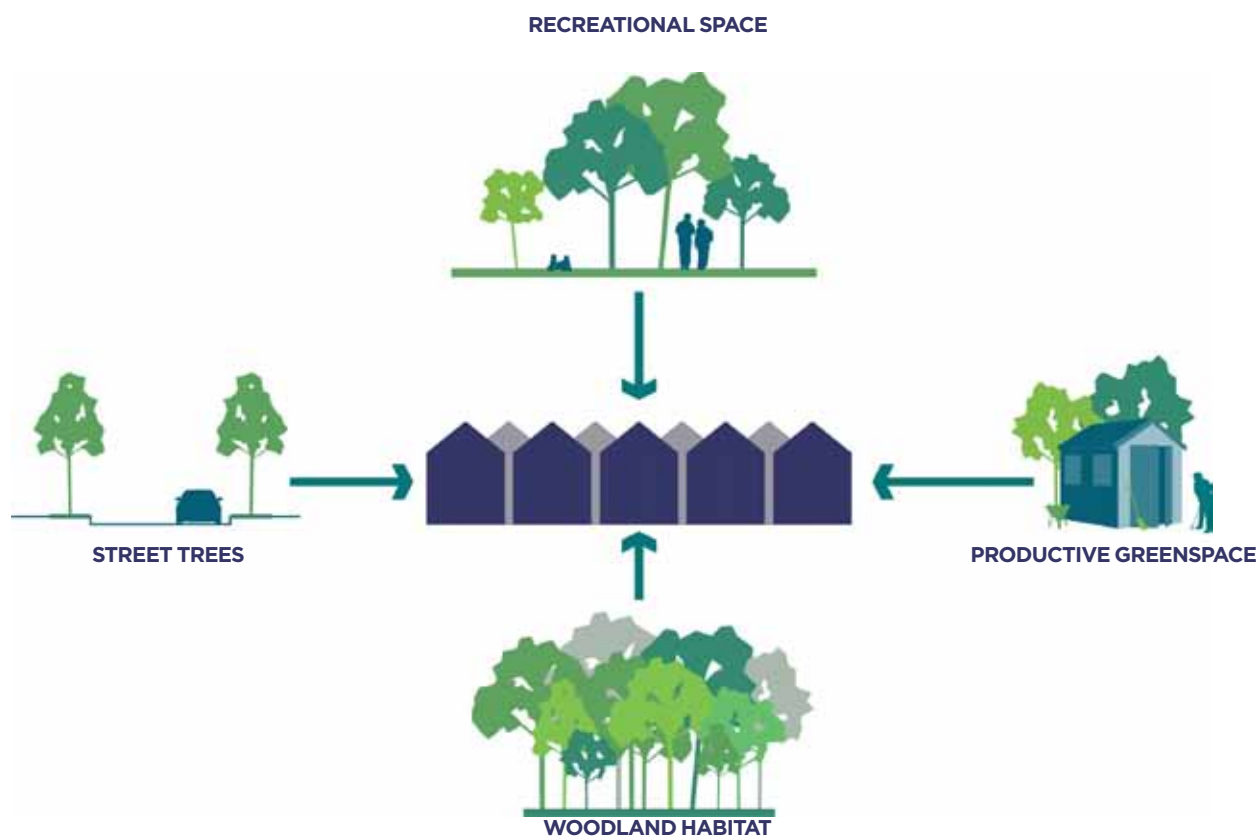


INTENSIFICATION OF EXISTING SETTLEMENTS

JUSTIFICATION

The key principle is that across the Energetica corridor, green infrastructure including parks and walking routes, waterways, existing landscape elements, habitat networks, hedgerows, trees, woodland and shelterbelts will become a core characteristic of new development.





The potential benefits of this requirement include:

ECONOMY

- a green settlement pattern enhances the quality of place for existing and future communities and potential investors and is an essential ingredient in building sustainable and vibrant communities
- green infrastructure provides an enhanced environmental context for new development
- adaptable, open-ended and well connected places create positive lifestyle conditions
- there is a correlation between quality design in the public realm and property values

ENVIRONMENT

- legible and permeable movement networks reduce car use and a decrease in pollution, noise nuisance and carbon emissions
- convenient and pleasant environments will increase walking and cycle use
- helps to mitigate the effects of climate change and encourage biodiversity and habitat creation
- the key landscape character areas of the Energetica corridor will be enhanced

QUALITY OF LIFE

- a green settlement pattern promotes better public health and creates a sense of wellbeing
- a green settlement pattern creates a setting for active lifestyles and for talent attraction
- the provision of green infrastructure provides increased opportunities for recreation

04 SETTLEMENT STRUCTURE

01.4 – A DIFFERENTIATED DENSITY PATTERN

XL, M - CORRIDOR WIDE/NEIGHBOURHOOD

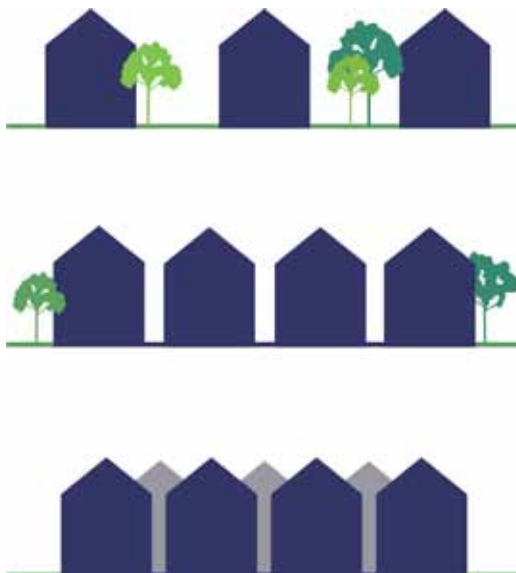
JUSTIFICATION

New residential, mixed, industrial, business or employment area development should:

1. follow a density pattern which is set by context, ranging from 20 units/hectare around settlement edges to 70 units/hectare in settlement centres
2. avoid uniform density spread and instead differentiates between city / town / village centre-style environments where density patterns mirror or exceed those traditional patterns (and where public transport stops / social condensers / work-hubs are concentrated) and a looser pattern on the outskirts of settlement
3. should seek to maintain or enhance existing density levels in traditional centres of settlements
4. consider lower densities where connections to landscape are made, especially where usable, green or food producing open space is provided, creating a trade-off between different values and clustering within sites to create new greenspace

The key principle is that the density of new development should create the best balance between communal amenity, reinforcing existing facilities, support for public transport and minimising uptake of undeveloped land.

DENSITY TRANSECT



DIFFERENTIATED
DENSITY PATTERN



The potential benefits of this requirement include:

ECONOMY

- higher densities in traditional centres and new cores can generate greater interaction between businesses and people – but the same results can be generated by lower density peripheral development if they are properly planned
- proximity provides opportunities for social interaction which in turn provide the conditions for social innovation

ENVIRONMENT

- higher densities reduce car use and a decrease in pollution, noise nuisance and carbon emissions
- higher densities can encourage walking and cycle use
- higher densities can reduce the take up of agricultural land
- higher densities lead to greater scope for viable public transport services
- density can be an important factor in reducing car use in terms of both mode share and distance travelled
- lower densities on settlement edges can provide better conditions for integration with the landscape and a more sensitive response to valued habitats

QUALITY OF LIFE

- careful consideration of density can enhance everyday life by improving convenience, access to schools, work and to public transport

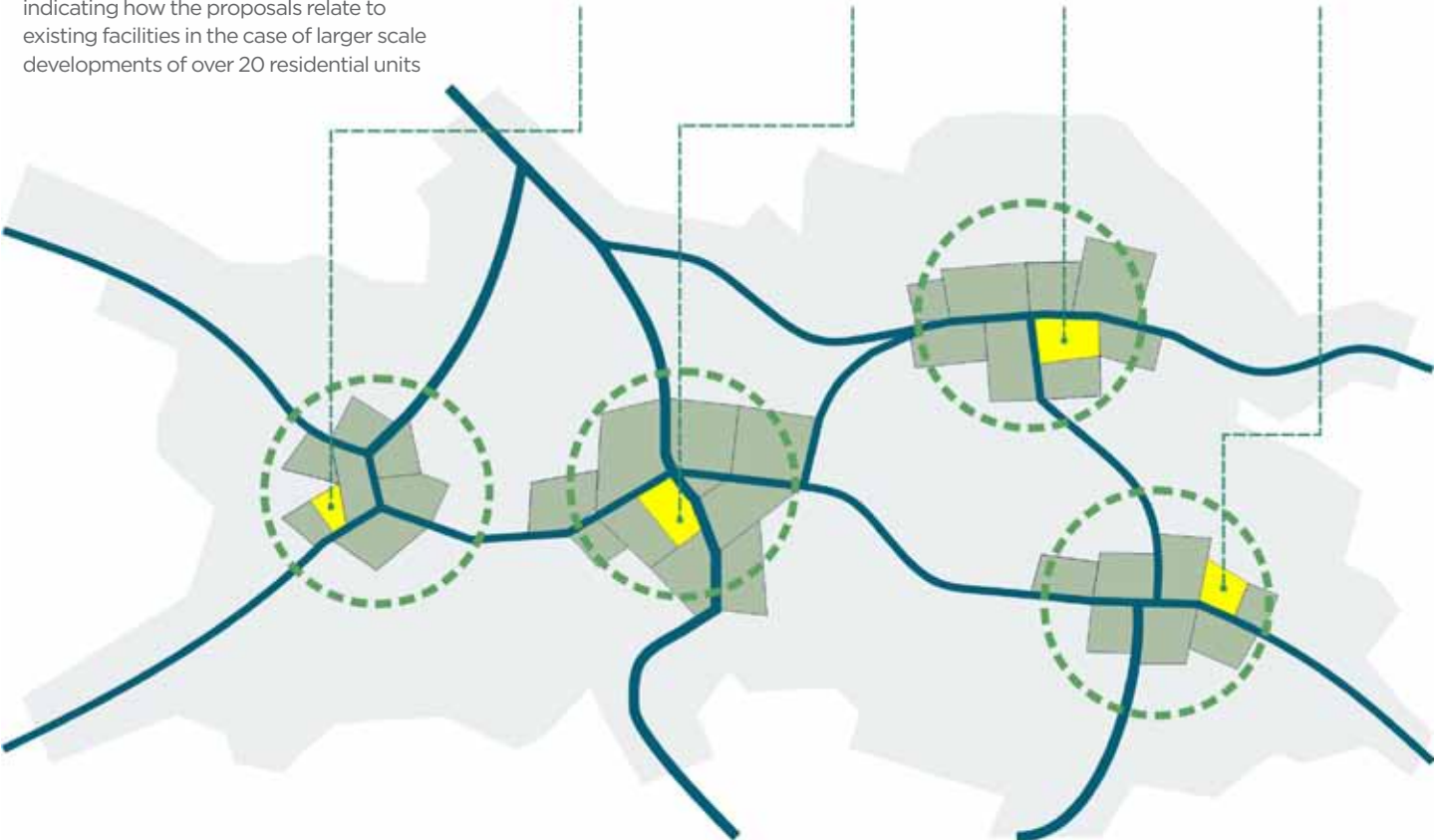
04 SETTLEMENT STRUCTURE
01.5 – A POSITIVE RELATIONSHIP WITH EXISTING CENTRES AND FACILITIES

XL, M - CORRIDOR WIDE, NEIGHBOURHOOD JUSTIFICATION

New developments will have a positive relationship with existing centres and facilities and should:

- 1. demonstrate that the proposal strengthens existing centres and facilities, recognises the value of existing resources, demonstrate how these can be maintained or enhanced by the proposal and how communities can benefit from the development
- 2. occur within indicative radial distances of existing facilities or provide new facilities. These radial distances will be based on 5 minute walking times to local centres and 10 minute walking times to neighbourhood centres or transport hubs
- 3. provide a Social Infrastructure Strategy indicating how the proposals relate to existing facilities in the case of larger scale developments of over 20 residential units

The key principle is that these facilities should not only be maintained and enhanced for as long as they are considered to be valuable but also that new development should have a constructive correlation with these resources in terms of accessibility, safety and visibility, additional facilities, their scale and governance.





The potential benefits of this requirement include:

ECONOMY

- the health of existing centres is vital to the wellbeing of the Energetica corridor
- developing facilities which maintain or enhance the existing structure of facilities is a critical part of the Energetica economy

ENVIRONMENT

- legible and permeable access to existing centres and facilities or to enhanced provision creates a safer and higher quality living environment
- better provision of local facilities reduces the need to travel

QUALITY OF LIFE

- existing centres and facilities are central to the communal life, identity and sense of place of the Energetica corridor and should be either maintained or enhanced by new developments

04 SETTLEMENT STRUCTURE

01.6 – A DELIBERATE (CO)LOCATION OF NEW FACILITIES

XL, M - CORRIDOR WIDE, NEIGHBOURHOOD

New development should consider the co-location of facilities where this enhances opportunities for proximity, density, vitality and diversity by:

- intensifying existing settlements by providing facilities that complement existing provision, creating resource centres for communities, health, learning and work
- the provision of new facilities and uses which maximise social interaction and provide meeting places for all ages in the community
- the implementation of small interventions to create sociable spaces

JUSTIFICATION

A critical component of the future settlement structure of the Energetica corridor will be the ability to co-locate facilities. Traditional settlements in the area evolved with a range of facilities and uses in close proximity which suited the life and economy of communities a century ago. In the 21st century, a more considered view is necessary in order to obtain the theoretical benefits of 'mixed use' in more considered manner. The key principle is that new development should work with synergies between facilities in a way that reflects lifestyle changes in the 21st century, enhancing opportunities for proximity, density, vitality and diversity.





The potential benefits of this requirement include:

ECONOMY

- the co-location of facilities which include business space facilitates provide valuable social exchange, opportunities for everyday innovation / learning / sharing resources
- combining facilities in a synergetic context or double use through timetable planning can reduce overheads, improve viability through shared facilities and energy efficiency

ENVIRONMENT

- the integration of uses and facilities which have been traditionally separate opens up opportunities for active participation
- co-location of facilities potentially reduces transport costs, reducing the need to travel
- co-location reduces the need for new build and represents efficient use of resources

QUALITY OF LIFE

- creating the conditions for sociable community life, improving neighbourliness and social contact
- integrating different age groups in a common lifestyle with shared identity across leisure, work and health
- co-locating facilities provides opportunities for increased interaction in the communal realm, additional street activity and therefore more comfortable social space

04 SETTLEMENT STRUCTURE

01.7 – DESIGNING FOR MIXED COMMUNITIES

M - SETTLEMENT

New developments should be designed for mixed communities and should:

- meet a maximum score in Building for Life for categories 2 (an accommodation mix that reflects the needs and aspirations of the local community) and 3 (tenure mix that reflects the needs of the local community), and are fully compliant with PAN 78: Inclusive Design
- contain a maximum number of units of identical size and tenure that can be delivered by one developer within one development



RANGE OF HOUSING TYPES AND TENURES

JUSTIFICATION

Neighbourhoods are more successful when they avoid large concentrations of housing of the same type and the Government attaches “high importance to the development of mixed, sustainable communities with a range of housing types and tenures which can share community and other facilities” (PAN 67). In particular, a good mix of housing types, sizes, tenures and procurement routes is important in creating a basis for a balanced community where different income groups and generations can live together and where people’s evolving housing needs could be accommodated. The key principle is that Energetica places are to be distinguished not only by having lifetime neighbourhoods in terms of housing type and tenure mix, but also by providing a richness of places of social exchange where different people can meet and socialise.





MIXED COMMUNITY

The potential benefits of this requirement include:

ECONOMY

- A well-designed neighbourhood will provide accommodation that meets the needs of single person households, small and large families as well as offering live-work possibilities, providing choice and lowering the cost of living across the lifetime of families and individuals
- Self-build and collective self build can enable a lowering of build cost enhancing affordability of homes to end users

ENVIRONMENT

- Mixed communities can adapt to changing circumstances without having to be completely rebuilt, lengthening lifetime of neighbourhoods

QUALITY OF LIFE

- a mix of housing types, uses and procurement types can create more attractive residential environments with greater diversity in building forms and scales and setting a specific Energetica identity
- a variety and mix of demographics will help the neighbourhood support different types of activity at different times of the day
- a mix of accommodation provides opportunities for communities where people can move home without leaving a neighbourhood

04 SETTLEMENT STRUCTURE

01.8 – THE INTEGRATION OF WORKING ENVIRONMENTS

M - SETTLEMENT

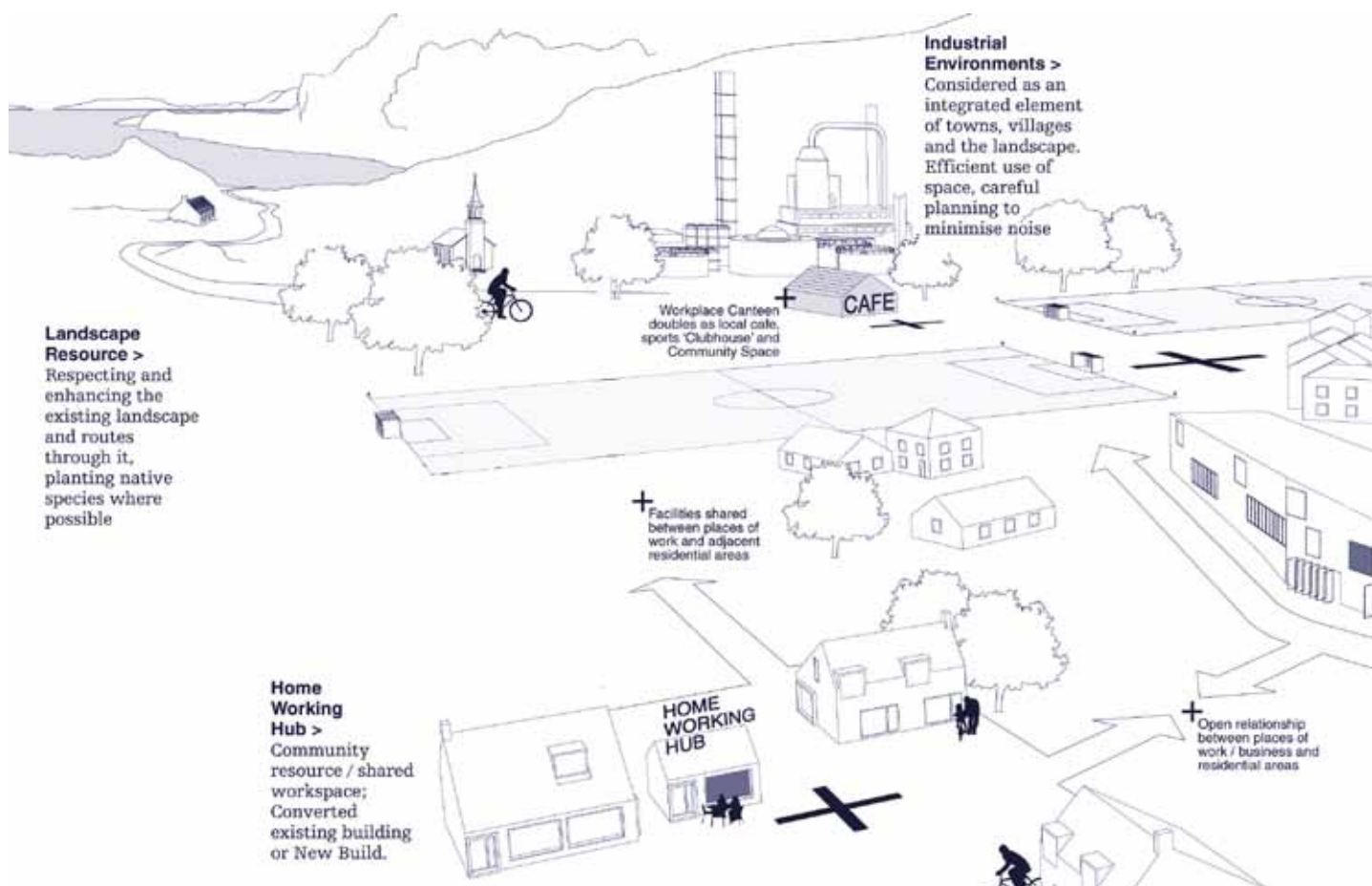
We will encourage developments in which working environments are integrated in the fabric of settlements if:

- new working environments are considered as integrated elements of towns, villages and the landscape
- new working environments integrate street infrastructure, public realm and shared facilities (such as sports, childcare, school / learning facilities)
- through landscape design and the articulation of buildings towards the street, new working environments are integrated in existing settlements

JUSTIFICATION

The integration of working environments in the fabric of places in the Energetica corridor can make a valuable contribution to the quality and distinctiveness of the area. This includes industrial environments, which play an important part in the future of the corridor and should therefore be considered to be amenable to design guidance. Whilst bearing in mind environmental constraints (noise, smell, dust, and traffic) that give rise to a need for segregation from residential accommodation, it is possible to avoid the image of industrial areas as unsightly and unsafe, instead considering them part of a positive sense of place. The key principle is that wherever possible, working environments should be integrated in the fabric of settlements.





The potential benefits of this requirement include:

ECONOMY

- better facilities for employees & visitors, better working conditions & productivity
- distinction and better environment for investment and attraction of companies
- creating the conditions for innovation
- better safety
- more efficient use of land will improve values

ENVIRONMENT

- better integration can reduce the need to travel
- conditions for biodiversity improved
- efficient land-use will reduce land-take

QUALITY OF LIFE

- industrial areas can avoid being no-go zones and instead be part of positive identity
- efficient land-use will reduce land-take

04 SETTLEMENT STRUCTURE

01.09 – THE INTEGRATION OF NON-INDUSTRIAL WORKING ENVIRONMENTS

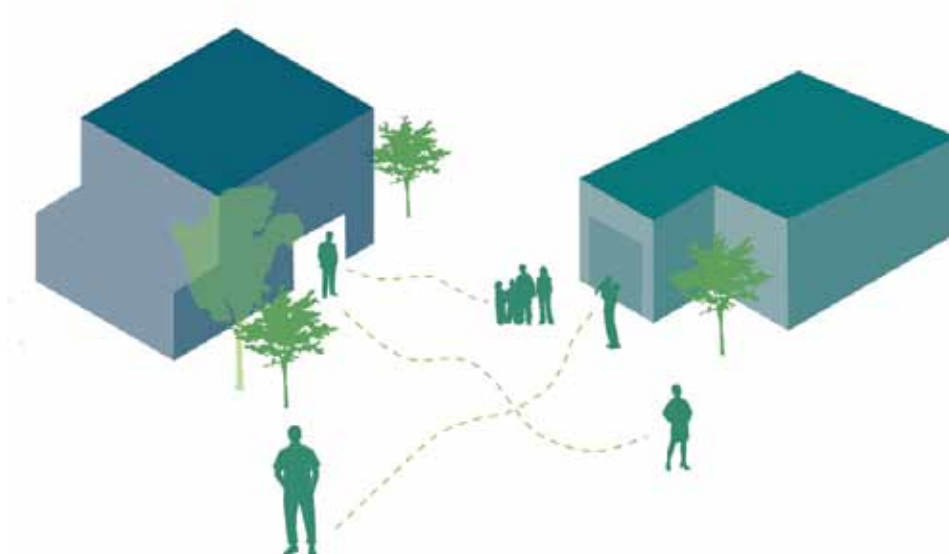
M - SETTLEMENT

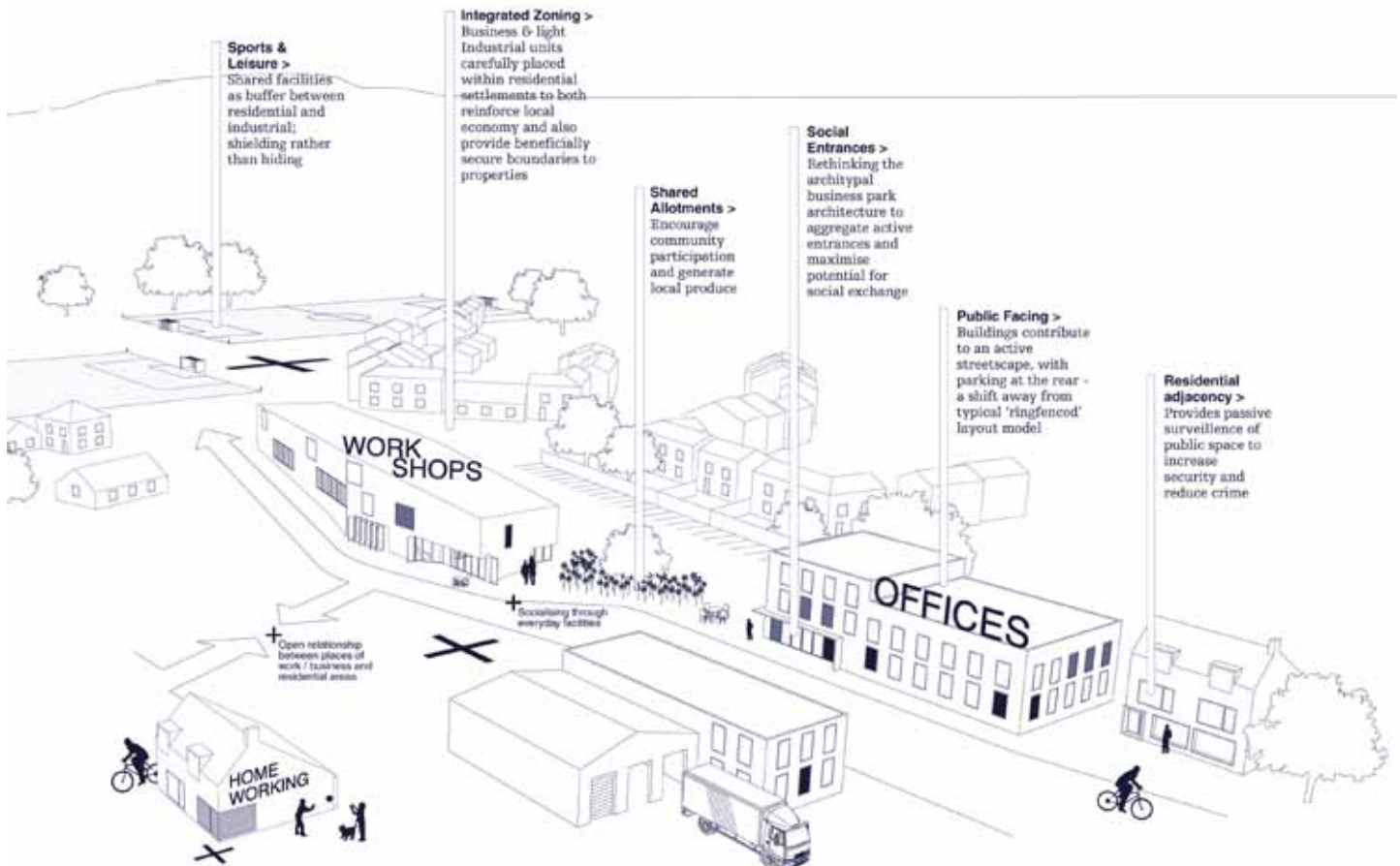
We will encourage developments which help to provide integrate non-industrial working environments if:

- on the assumption that environmental nuisance factors do not dictate otherwise, mixed use functions should be encouraged, integrating office workspace and certain light industrial / warehousing functions with uses such as such as healthcare, education, leisure, sports and residential into the everyday fabric of the city through a good quality public realm.

JUSTIFICATION

The integration of working environments in the fabric of places in the Energetica corridor can make a valuable contribution to the quality and distinctiveness of the area. Apart from industrial uses with significant environmental constraints (noise, smell, dust, and traffic) that give rise to a need for segregation from residential accommodation, there is no strict requirement to limit employment uses to 'business parks' that are separated from the everyday environment of settlements. Instead, mixed-use employment and residential zones can be created where a balance is achieved and this approach is particularly relevant for the restructuring of older business parks and their progressive integration into settlements. The key principle is that wherever possible, working environments should be integrated in the fabric of settlements.





The potential benefits of this requirement include:

ECONOMY

- better facilities for employees & visitors through better working conditions & productivity
- distinctive and better environment for investment and attraction of companies
- creating the conditions for innovation
- better safety
- more efficient use of land will improve values

ENVIRONMENT

- better integration can reduce the need to travel
- conditions for biodiversity improved
- efficient land-use will reduce land-take

QUALITY OF LIFE

- industrial areas can avoid being no-go zones and instead be part of positive identity
- efficient land-use will reduce land-take

04 SETTLEMENT STRUCTURE
01.10 – INNOVATIVE ENABLING INFRASTRUCTURE

XL CORRIDOR-WIDE, M SETTLEMENT

We will encourage developments which help to provide innovative enabling infrastructure if they offer universal availability of:

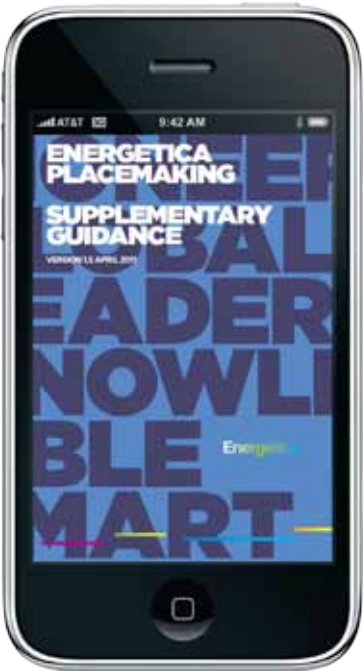
- broadband infrastructure connections to the best broadband connection speeds available
- state-of-the-art smart grid infrastructure
- electrical vehicle charging points
- open source information resources that map and communicate key aspects of Energetica performance such as networked workplace availability, and real-time energy use

JUSTIFICATION

Settlements across the Energetica corridor should become exemplars of socially innovative community arrangements, work and communication, governance and information, and energy reduction models aided by state-of-the-art and continuously evolving digital tools.

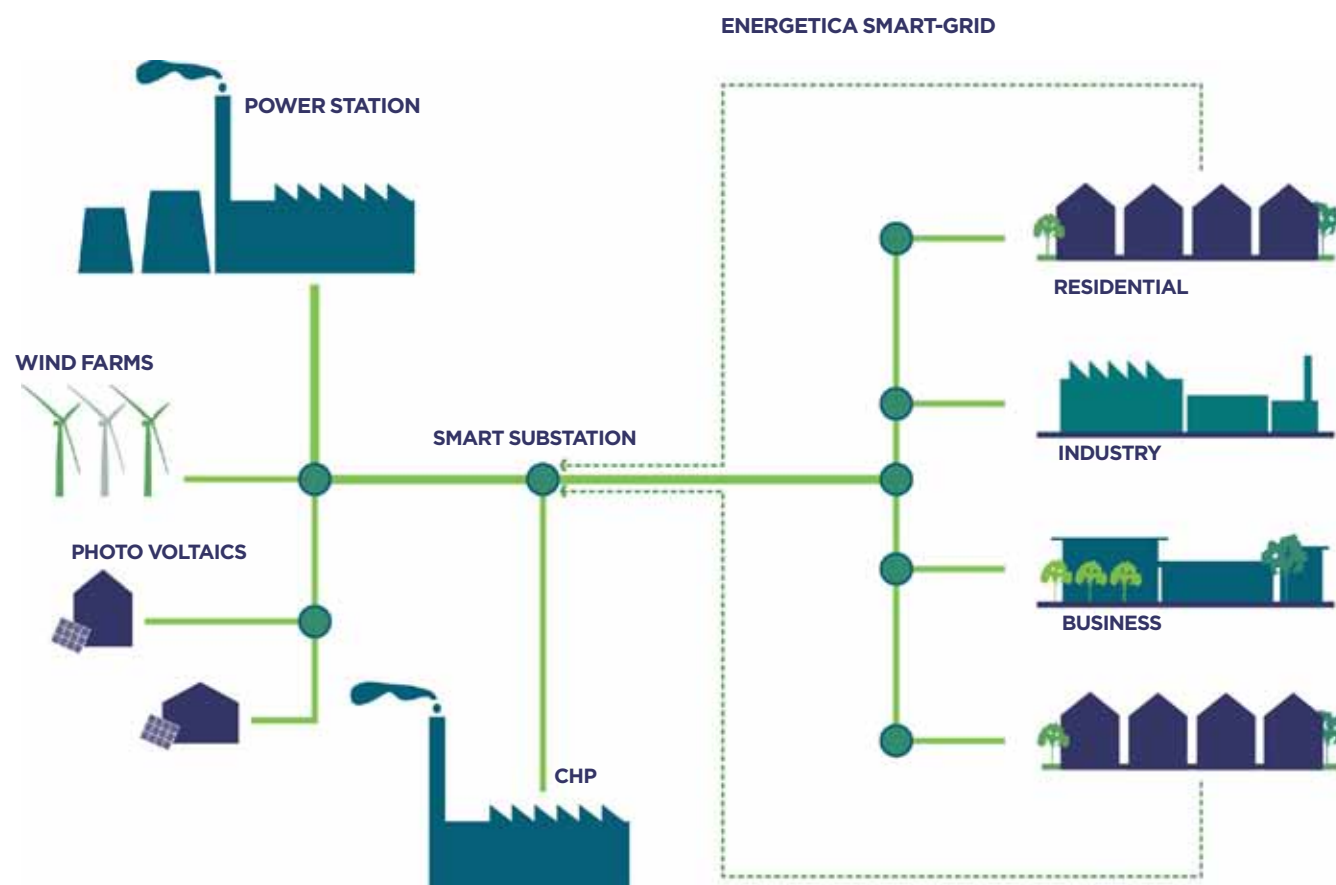
The key principle is that the innovative nature of the corridor should be expressed in the infrastructures that enable residents and businesses to profit from global digital connectivity and the opportunities of continuous innovation to underpin sustainable lifestyles.

ELECTRIC CAR CHARGING POINT



ENERGETICA MOBILE APPS





The potential benefits of this requirement include:

ECONOMY

- the integration of enabling infrastructure benefits the worker and companies by providing a physical workspace close to their residence, and by enabling seamless links to global networks, resulting in reduced transportation demands and increased productivity
- the embedding of open-source enabling infrastructure provides incentives for continuous localised, open source innovation regarding smart ICT and grid technologies – also, the procurement of these infrastructures creates a clear regional market for innovation, attracting companies and spurring innovation

ENVIRONMENT

- the integration of networked work infrastructure by enabling home working and long distance communication, reduces the energy use associated with travel and the integration of smart-grid infrastructures enables production of renewable and reduces energy use

QUALITY OF LIFE

- ICT innovations are catalysts of structural change for personal, work, and community life that will result in the development of more distributed, compact, and mixed-use urban forms
- Enabling home-working creates affordances and choices to improve the work life balance improves the quality of life of employees
- The enabling infrastructures can be part of a regional identity for digital empowerment, open source governance etc enhancing the innovation identity of Energetica

**ENERGETICA
PLACEMAKING
PLANNING ADVICE**

VERSION 1.4 - APRIL 2011

02 ENVIRONMENTAL PERFORMANCE

ENERGY SUSTAINABLE
CONSTRUCTION MOVEMENT
AND TRANSPORT LOCAL
FOOD INFRASTRUCTURE
INTEGRATED RECYCLING
AND WASTE AN INTEGRATED
APPROACH TO WATER
ENERGY SUSTAINABLE
CONSTRUCTION MOVEMENT
AND TRANSPORT LOCAL
FOOD INFRASTRUCTURE
INTEGRATED RECYCLING
AND WASTE AN INTEGRATED
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ENERGY SUSTAINABLE
CONSTRUCTION MOVEMENT
AND TRANSPORT LOCAL
FOOD INFRASTRUCTURE
INTEGRATED RECYCLING
AND WASTE AN INTEGRATED

O2 ENVIRONMENTAL PERFORMANCE
O2.1 – ENERGY

M – SETTLEMENT, S - PLOT

We will encourage developments that make a significant contribution to the Energetica carbon and ecological impact reduction targets relating to energy if the planning application includes an energy statement that sets out clearly:

- that the proposed development has taken into account the Energetica energy strategy and that the proposals in the planning application can be seen to contribute to the achievement of that strategy
- that a formal energy hierarchy approach – reduce, re-use, recycle – has been used in the design of the development
- that new development intended for human occupation will achieve an energy efficiency standard a minimum 20% in excess of the Building Regulations 2010
- that takes into account the Code for Sustainable Homes - the national standard for the sustainable design and construction of new homes
- that commercial and industrial buildings will achieve BREEAM Excellent + or Excellent with regard to the energy performance of the building

Developers, architects and builders should make use of appropriate performance standards and design manuals when designing their developments including:

For Homes:

- EcoHomes (Excellent as minimum standard) and AECB Silver and Gold Standard
- Passivhaus
- Energy Saving Trust Energy Efficiency Gold Standard

For Commercial and Industrial Buildings:

- BREEAM (Outstanding) and (Excellent)

CARBON AND ECOLOGICAL IMPACT
TARGETS AND METRICS

Targets:

- current % of individual total carbon emissions relating to energy use in buildings - 23%
- current % of individual total ecological footprint relating to energy use in buildings - 18%

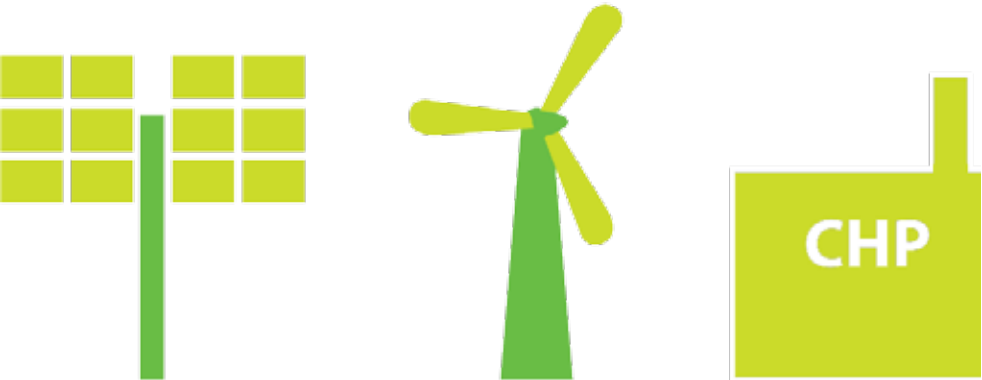
- carbon emissions reduction by 2050 of 100% - from 2.78 tonnes/person/annum to zero TPA
- ecological footprint reduction by 2050 of 75% - from 1.01 to 0.25 global hectares

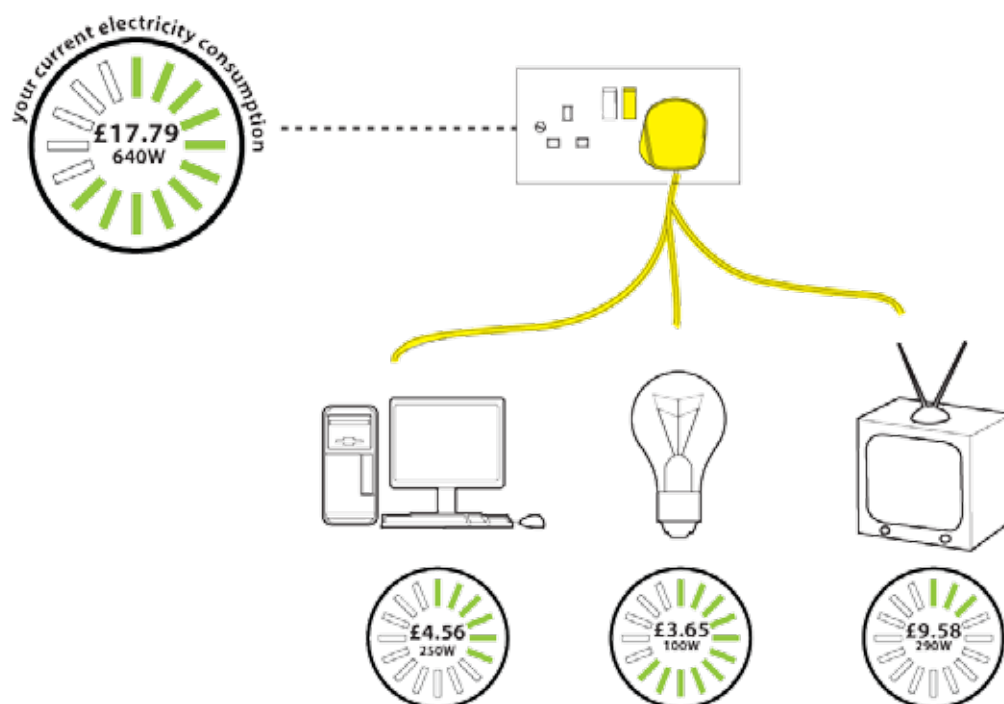
Potential metrics include:

- kWh and CO2 per person/per dwelling/ per m2 of space against national and local average baseline targets
- Energy consumption data for each type of energy source
- % of units to be to be airtightness tested after two years
- resident/ tenant thermal comfort and air quality

JUSTIFICATION

Energy use in buildings accounts for 23% of carbon emissions and 18% of the ecological footprint so new developments have an important role to play in helping to reduce overall CO2 emissions. New buildings require to be built to a standard that will be relevant for their lifetime and with regard to energy performance this means extremely high energy efficiency standards and the availability of renewable energy sources for residual energy needs. All new developments will be designed and built to both reduce demand for energy and provide options for the supply of remaining demand from renewable sources.





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- benefits to the construction industry through learning of new building methods and skills,
- encouraging the development of a renewable energy manufacturing, supply, installation and maintenance industry in the corridor,
- supporting the local economy with biomass and waste-to-energy solutions that stimulate local enterprise in production (providing a new income stream for farmers for instance), sorting, distribution and recycling
- benefits to the developer/ builder through the use of cost effective, low technology approaches to reducing demand for energy which can be easily adopted and implemented
- benefits to the local economy through release of funds otherwise allocated to paying higher fuel bills

Environment

- making a valuable contribution to the Scottish climate change strategy by reducing the amount of CO2 released to the atmosphere from energy inefficient homes and the use of fossil fuel heat sources.
- contribution to the achievement of the Energetica carbon and ecological impact reduction targets by reducing energy use in homes and buildings.
- reducing demand for energy - through the construction of high performance buildings
- reducing dependence on fossil fuels - through increased take-up of renewable energy solutions
- reducing the amount of CO2 released to the atmosphere through the construction of more energy efficient buildings and provision of renewable energy solutions

Quality of life

- provision of a better living and working environment and improved health and well-being through the provision of better internal environments.
- opportunities for increased health and well-being (and for some the avoidance of fuel poverty) through the release of funds that would otherwise be spent on energy bills-improved diet, leisure activities etc.
- increased social engagement and awareness through owners, occupiers and residents of homes and buildings identifying with being part of the shift to renewable energy and helping to deal with climate change mitigation and adaptation.

02 ENVIRONMENTAL PERFORMANCE

02.2- SUSTAINABLE CONSTRUCTION

M – NEIGHBOURHOOD, S - PLOT

We will encourage developments that make a significant contribution to carbon and ecological impact reduction targets relating to construction, subject to other policies, if they demonstrate the use of industry best practice in responsible sourcing, use and re-use of construction materials that have a reduced impact on the environment. This should include:

- use of locally sourced materials
- use of FSC or similar certified timber
- use of materials with a Green Guide to Specification rating of A+ or A

JUSTIFICATION

All new development should be planned to minimise the carbon emissions and ecological footprint relating to construction and maintenance of buildings – this includes the embodied energy in the manufacture of products, carbon miles associated with transport of goods and emissions related to the disposal of materials at end of life of the building. The key principle is to design buildings to last and be suitable for deconstruction and re-use at end of life making best use of resources already available around the site. Wherever possible, local materials such as stone and timber, sourced from responsible suppliers and with appropriate certification (where relevant) should be used. Other materials and components should be sourced in accordance with the Green Guide to Specification.

The relevant standards to be considered for all new buildings include:

For Homes:

- Green Guide to Specification (A+ or A)
- EcoHomes (Excellent as minimum)

For Commercial and Industrial Buildings:

- Green guide to Specification (A+ or A)

CARBON AND ECOLOGICAL IMPACT TARGETS AND METRICS

- current % of individual total carbon emissions relating to construction materials in buildings - 8%
- current % of individual total ecological footprint relating to construction materials in buildings - 8%
- carbon emissions reduction by 2050 - 80% - from 1tonnes/person/annum to 0.2 TPA
- ecological footprint reduction by 2050 -75% - from 0.46 to 0.09 global hectares per annum

Potential metrics include:

- embodied CO₂/m² per home
- embodied CO₂/m² of infrastructure





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- benefits to the local economy from sourcing local materials – ie timber and stone
- maintenance of local jobs and skills through the use of local materials producers and suppliers
- benefits to the construction industry through reduced transport of materials over long distances

Environment

- contribution to Scottish Climate Change Strategy and Scottish Sustainable Procurement Action Plan by using low embodied energy materials and local materials where possible
- Reduction in the use of high embodied energy materials in construction
- Reduction in the total carbon miles in the transport of materials by using locally sourced materials
- Reduction in the amount of raw materials used in the construction of buildings by designing buildings to be more durable and to allow for deconstruction and re-use at end of life

Quality of life

- less disruption to local people from the use of more durable buildings able to adapt to change of use thus requiring less frequent replacement/refurbishment
- more employment and money in the local economy from the use of local producers and suppliers of materials
- reducing resource depletion from harmful procurement practices

O2 ENVIRONMENTAL PERFORMANCE
O2.3 – MOVEMENT AND TRANSPORT

XL – CORRIDOR, M – SETTLEMENT, S – PLOT

We will encourage developments that make a significant contribution to the carbon and ecological impact reduction targets relating to transport, subject to other policies, if the application includes a rigorous analysis of transport options in line with the Energetica transport strategy and a Green Transport Plan. This should include proposals:

- to link with and support public transport options
- to promote and support a switch from fossil fuel to clean fuel solutions
- to promote cycling and walking among residents and business users

JUSTIFICATION:

Transport accounts for a significant proportion of CO2 emissions and ecological impacts. Much of this impact relates to the use of private cars for commuting, shopping and leisure - particularly single occupancy cars. Energetica wants to promote and implement policies and actions that will achieve a huge reduction in these impacts over the coming decades and, wherever possible, through infrastructure, facilities and incentives promote the uptake of vehicles using low/zero carbon fuels and and/or super efficient engines. To help achieve this objective all new development should seek to achieve or contribute to a significant modal shift in transport by reducing reliance on fossil fuel based transport, private car use (especially for short journeys) and promoting walking and cycling, the use of public transport, car sharing and car clubs in the Corridor.

THE RELEVANT STANDARDS TO BE CONSIDERED FOR ALL NEW BUILDINGS INCLUDE:

For Homes:

- EcoHomes (Excellent as minimum standard)

For Commercial and Industrial Buildings:

- BREEAM (Outstanding) or (Excellent)

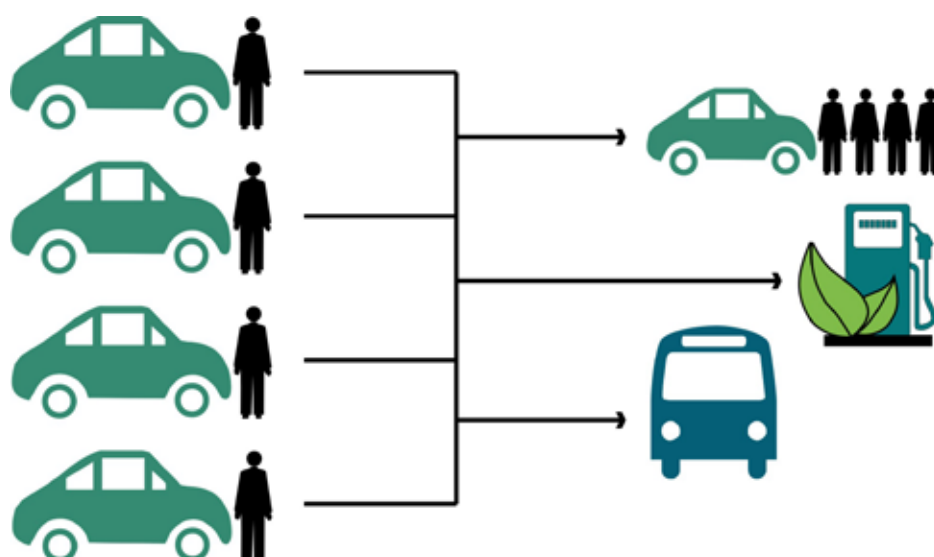
CARBON AND ECOLOGICAL IMPACT TARGETS

- % of individual total carbon emissions relating to transport - 23%
- % of individual total ecological footprint relating to transport - 15%
- carbon emissions reduction by 2050 - 80% - from 2.7 tonnes/person/annum to 0.55 TPA
- ecological footprint reduction by 2050 -75% - from 0.83 to 0.21 global hectares

Potential metrics include:

- CO2 emissions from personal transport per person per year
- miles travelled by car and use of public transport and bicycles
- passenger km/litre and freight tonne km/ litre as a measure of efficiency of fuel use in transport
- the modal split of commuting, leisure and shopping journeys
- % of total journeys made by car





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- increases in productivity from reductions in time lost in traffic jams through reduced car use and increased public transport use
- increased viability of public transport from a modal shift away from the private car
- potential reduction in expenditure on roads (capital and revenue) from reduction in number of individual journeys being made
- potential reductions in health spending from improvements to health and well being of Corridor residents from modal shift in transport patterns
- enhanced viability of local shops from being more accessible to people who can walk or cycle to them easily from their homes
- additional business opportunities can arise from car clubs and low carbon local transport networks for developers and/or social enterprises
- more money in the local economy from less being spent on the purchase and maintenance of cars through the development of car clubs

Environment

- significant contribution to Scottish Climate Change Strategy from reduction in carbon emissions in the corridor due to vehicle use
- significant contribution to the Energetica Carbon emissions and ecological impact reduction targets
- reductions in CO2 emissions from reduced ownership/use of the motor car.

Quality of life

- improved health and well being for a significant number of residents from switching to walking and cycling
- Improved social equity as those unable to afford to buy and maintain a car can have access to one through a car club
- reduced risk of ill health for those living close to main roads from a reduction in vehicle emissions
- developments will be more pleasant and attractive places to live from being designed for people rather than the car
- reduced stress from being able to work at home for part of the working week and spending less time commuting
- improved safety for (especially for children) from a reduction in the dominance of vehicles in the built environment

02.4 - LOCAL FOOD INFRASTRUCTURE
02 ENVIRONMENTAL PERFORMANCE

XL - CORRIDOR, M - SETTLEMENT, S - PLOT

We will encourage developments that make a significant contribution to the carbon and ecological impact reduction targets relating to food production and distribution, subject to other policies, if :

- provision is made to promote and enable residents to grow, communally and/or individually, a proportion of their own fresh food requirements
- appropriate food production methods (ie permaculture, hydroponics, organic horticulture) are identified and proposed
- links with appropriate local food groups are promoted and established

JUSTIFICATION

The issue of food security is becoming of national concern. With a forecast growth in the global population to 9 billion, from the current 6 billion, by 2050 and with reduced land and fresh water availability for irrigation due to climate change pressure on global food supplies is going to grow leading, at best, to higher prices for staple foods and, potentially, to serious food shortages.

The UK imports more than 30% of its food requirements and so the ability to continue to source such a high proportion of food from overseas markets may be tested. In parallel, there is an unmet demand from individuals and groups for land to allow them to grow a proportion of their own food. In most urban areas this land is not made available as part of the development process.

Energetica is keen to respond to this global challenge, address the inefficiencies in the food system and help people who want (now and in the future) to grow their own food.

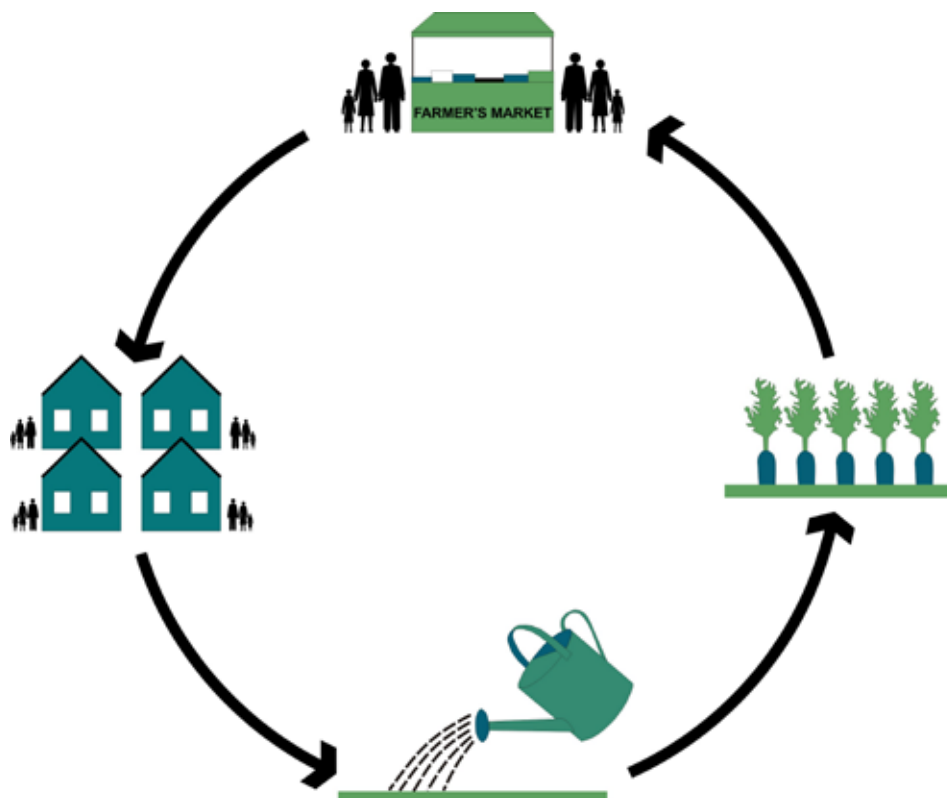
CARBON AND ECOLOGICAL IMPACT TARGETS

- current % of individual total carbon emissions relating to food and drink consumption - 8%
- current % of individual total ecological footprint relating to food and drink consumption - 23%
- carbon emissions reduction by 2050 - 60% - from 1 ton/person/annum to 0.4 TPA
- ecological footprint reduction by 2050 -60% - from 1.23 to 0.5 global hectares

POTENTIAL METRICS INCLUDE:

- amount of food supplied by farms within a 50 mile radius
- amount of local produce in local shops and catering outlets
- amount of food waste arising
- number of local people and groups producing a proportion of their own food





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- increased spend in the local economy from a greater use of locally sourced produce
- higher level of secure local employment in the agricultural sector from higher local food production and retailing
- reduced chance of significantly higher food prices for consumers from reduced dependency on imported foods as a result of more food being grown locally
- more money circulating in the local economy as more people grow a proportion of own food releases funds to spend locally

Environment

- lower level of carbon miles associated with food as less food imported from other parts of UK, EU and further afield.
- less local pollution of waterways from reduced use of fertiliser and pesticides as new farming techniques are adopted.
- improved local environment and biodiversity from a well tended productive public realm
- reduced resource depletion from reduced need for packaging of goods transported over long distances
- reduced food wastage from community buying fresh food locally in smaller quantities and more frequently

Quality of life

- potential for increased health and well being from consumption of higher proportion of fresh produce in diet
- enhanced sense of community from involvement of all generations in community gardens
- improved sense of place and identity from involvement in communal growing activities

O2 ENVIRONMENTAL PERFORMANCE
O2.5 – AN INTEGRATED RECYCLING AND WASTE STRATEGY

M – SETTLEMENT, S – PLOT

We will encourage developments that make a significant contribution to the carbon and ecological impact reduction targets relating to recycling and waste, subject to other policies, if the proposal:

- links with the Energetica recycling and waste strategy;
- adopts a robust reduce, re-use, recycle approach to dealing with waste
- provides residents with easy and maintainable recycling and disposal facilities

JUSTIFICATION

Waste is a resource management issue rather than a disposal issue and, in line with the National Waste Strategy hierarchy approach of Reduce: Re-use; Recycle, the key principle is that Energetica will seek to minimise the amount of waste being sent to landfill and will explore and implement a full range of added value waste management opportunities. All proposals should seek to minimise the amount of waste arising from new developments, both during construction and post-construction, and a full range of measures including waste separation, disposal and composting should be incorporated by the developer /contractor into their designs for neighbourhoods, homes and business premises.

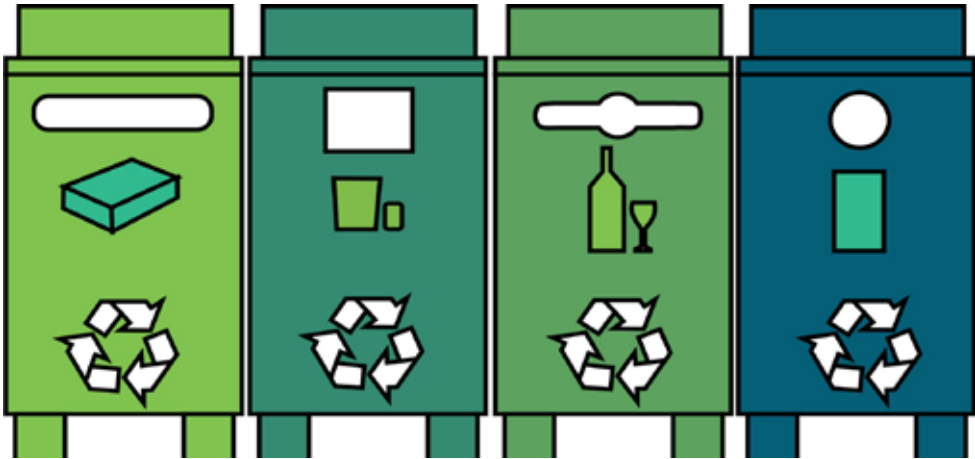
THE RELEVANT STANDARDS TO BE CONSIDERED FOR ALL NEW BUILDINGS INCLUDE:

- For Homes:
- EcoHomes (Excellent as minimum standard)
- For Commercial and Industrial Buildings:
- BREEAM (Outstanding) and (Excellent)

CARBON AND ECOLOGICAL IMPACT TARGETS

- the Council will seek to increase the amount of municipal waste being re-cycled or composted to 60% by 2020 and 70% by 2025
- only 5% of municipal waste will be sent to landfill by 2025
- 80% of non-hazardous construction, demolition and excavation waste to landfill – immediate

- POTENTIAL METRICS INCLUDE:
- amount / % of waste recycled – tonnes
 - amount / % of waste to landfill – tonnes
 - amount / % of waste sent to incineration and anaerobic digestion - tonnes
 - reduction in total waste arising on a per-capita basis for households
 - amount of organic waste composted on site





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- significant business opportunity and job creation through improved re-cycling and re-use of waste
- savings for businesses and councils in terms of landfill taxes
- potential for individuals to make money from selling unwanted products at local re-use centres rather than throwing them away
- potential for individuals to save money by buying quality second hand goods from local centres

Environment

- contribution to the Scottish Climate Change Strategy in terms of
 - reducing the growth in methane gas emissions from landfill sites
 - substitution of fossil fuel heat and electrical plant with waste incineration and anaerobic digestion plant
- reduction in the rate of depletion of natural resources through recycling and re-use of materials instead of disposing of them to landfill and using new resources to replace them.
- reducing the amount of carbon miles associated with waste disposal to landfill

Quality of life

- establishing waste minimisation & recycling as part of Energetica DNA / sense of place, including as part of place-making strategies at local level
- greater sense of community well being and engagement from living in and part of a development that takes resource management seriously
- improved public realm from the proper planning of waste collection and disposal facilities

O2 ENVIRONMENTAL PERFORMANCE
O2.6 – AN INTEGRATED APPROACH TO WATER

M – SETTLEMENT, S - PLOT

We will encourage developments that make a significant contribution to limiting increase in demand for potable water and to eliminating potential runoff and flooding problems arising from new development if proposals:

- contribute to the Energetica water strategy
- include a comprehensive SUDS plan
- include a potable water minimisation strategy and firm proposals for the inclusion of water efficient fittings in all properties including the provision of water meters

THE RELEVANT STANDARDS TO BE CONSIDERED FOR ALL NEW BUILDINGS INCLUDE:

- For Homes:
- EcoHomes (Excellent as minimum standard)
- For Commercial and Industrial Buildings:
- BREEAM (Outstanding) and (Excellent)

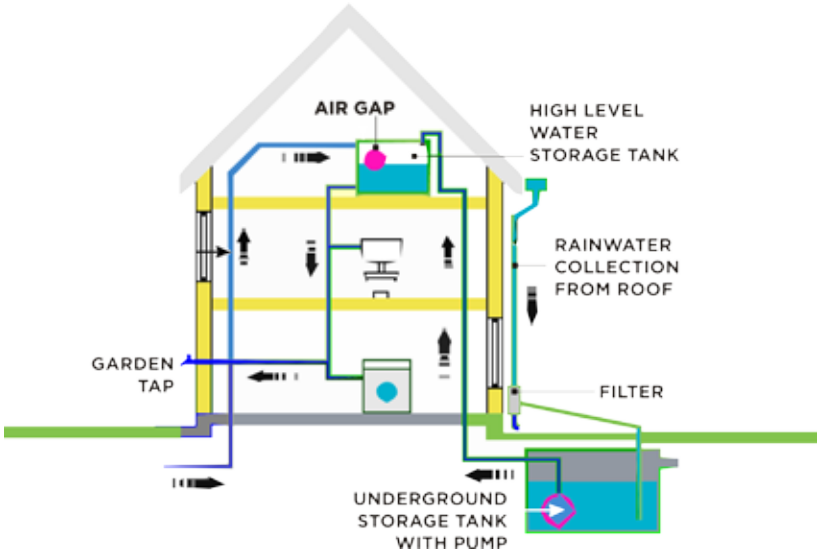
Target

- minimise increase in demand for water over current levels and flooding / overflow targets



JUSTIFICATION

The key principle is that water is a precious resource and as far as possible developments will limit any increase in demand for water and minimise the need for additional reservoirs. Cost effective measures for reducing potable water use are available and all new buildings should be fitted with water efficient fittings and consideration should be given to the use of rainwater harvesting and the supply of water efficient appliances where relevant. New development also has consequences in terms of run-off from hard surfaces and potential increases in localised flood risk so all new developments will require, in liaison with the appropriate suppliers, regulators and local authorities, to minimise any existing flood issues and prevent new issues arising by incorporating comprehensive SUDS strategies





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- reduced need to build and operate new water and by reducing the increase in use of potable water
- potential reduced expenditure on flood prevention measures through the use of SUDS systems for all new developments
- potential savings to developers and contractors from use of cost effective SUDS and local sewage solutions
- potential business and employment opportunities arising from the supply, installation and maintenance of rainwater recycling systems
- potential cost savings to residents and businesses from reduced water consumption if meters fitted

Environment

- reduced need to provide new reservoirs and energy intensive treatment plant from reductions in the use of potable water through recycling and water efficiency measures
- increasing the amenity and biodiversity value of land on the site through the use of SUDS
- protecting and improving surface water quality through the use of SUDS approach
- reducing the likelihood and adverse impact of flash flooding caused by run-off in heavy rain through a SUDS system

Quality of life

- more opportunity to enjoy biodiversity in the public realm through well planned and managed SUDS
- raised awareness of ecological and environmental benefits of water resource efficiency

**ENERGETICA
PLACEMAKING
PLANNING ADVICE**

VERSION 1.4 - APRIL 2011

03 BUILT FORM

**STREETS AS PLACES AN
ACTIVE PUBLIC REALM
A POSITIVE INTERFACE
BETWEEN PUBLIC AND
PRIVATE SPACE MANAGED
COMMUNAL SPACE
ADAPTABILITY AND
FLEXIBILITY HERITAGE
AND REUSE OF ASSETS
HOUSING SIZE AND SPACE
STANDARDS STREETS
AS PLACES AN ACTIVE
PUBLIC REALM A POSITIVE
INTERFACE BETWEEN
PUBLIC AND PRIVATE SPACE
MANAGED COMMUNAL
SPACE ADAPTABILITY AND
FLEXIBILITY HERITAGE AND
REUSE OF ASSETS HOUSING
SIZE AND SPACE STANDARDS**

03 BUILT FORM
03.1 - STREETS AS PLACES

XL - CORRIDOR WIDE, M - SETTLEMENT,
S - PLOT

We will encourage developments that have a balance between movement and place which is in favour of pedestrians if:

- the policies of Designing Streets are rigorously applied at all scales within the Energetica Corridor, starting with the principle that :

“Street design must consider place before movement” and maintaining that “Street design guidance, (...), can be a material consideration in determining planning applications and appeals.”

Street design should meet the six qualities of successful places, as set out in Designing Places and applied to streets in Designing Streets.

JUSTIFICATION

The public realm is a key resource of the places in which we live; its quality influences the look and feel of our places, sets conditions for informal social exchange, and has important impacts on the economic prosperity of places and people.

Across the Energetica corridor, the key principle is that wherever possible, the balance between the movement and place function needs to be moved back towards favouring the pedestrian, cyclist and public transport rather than simply the accommodation of the private car and other motor vehicles.





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- an integrated design approach that re-balances the needs of movement and places will improve the quality or the sense of place, and an improved quality of the public realm will be a factor in attracting people and firms to Scotland
- a good quality public realm facilitates social exchange
- minimising new road building is cost efficient

Environment

- a reduced speed limit wherever possible and appropriate will lead to a decrease in pollution, noise nuisance and carbon emissions
- facilitating walking and long-distance cycling will lead to a decrease in pollution, noise nuisance and carbon emissions
- a design led approach favours sustainable movement modes walking, cycling, public transport

Quality of life

- an integrated design approach that balances the needs of movement and places will improve the quality of the sense of place.
- reduced speed limits will enhance road safety
- a sense of place common to all its variable elements including commercial, residential, recreational and leisure developments
- increased walking and cycling will improve the health and well being of residents
- establish place identity through referencing use and location of sustainable travel modes such as cycling and car clubs

03 BUILT FORM

03.2 – AN ACTIVE PUBLIC REALM

M – SETTLEMENT, S - PLOT

We will encourage developments that facilitate a positive and active public realm for a wide range of users not only in everyday use but also through creating support and facilities for events if:

- development proposals clearly demonstrate and identify how public spaces provide a positive experience in everyday use and how they can also support a range of events
- the detail of the street design in each neighbourhood and plot creates places that can be used for informal social contact, play, and community events

JUSTIFICATION

The public realm gets meaning and value through its active use in everyday life. Hence the key principle and overriding ambition is that the public realm should facilitate a wide range of activities including formal and informal, everyday and special events. At a settlement level this means that a wide range of spaces that can underpin a large variety of activities must be included in masterplans: small squares that can accommodate events, allotments, spaces that accommodate sport and play, and a licensing / management policy that enables street parties and other locally organised events.





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- by setting a clear identity, character and quality of life, Energetica towns, villages, neighbourhoods and places can attract the benefits of talented people

Environment

- by creating a high quality daily living environment, reducing the need to travel and giving preference to sustainable transport modes

Quality of life

- creating the conditions for sociable community life, improving neighbourliness, social contact and perceptions of safety
- facilitating active and healthy lifestyles
- establishing an identity for the Energetica corridor

03 BUILT FORM

03.3 – A POSITIVE INTERFACE BETWEEN PUBLIC AND PRIVATE SPACE

M – SETTLEMENT S - PLOT

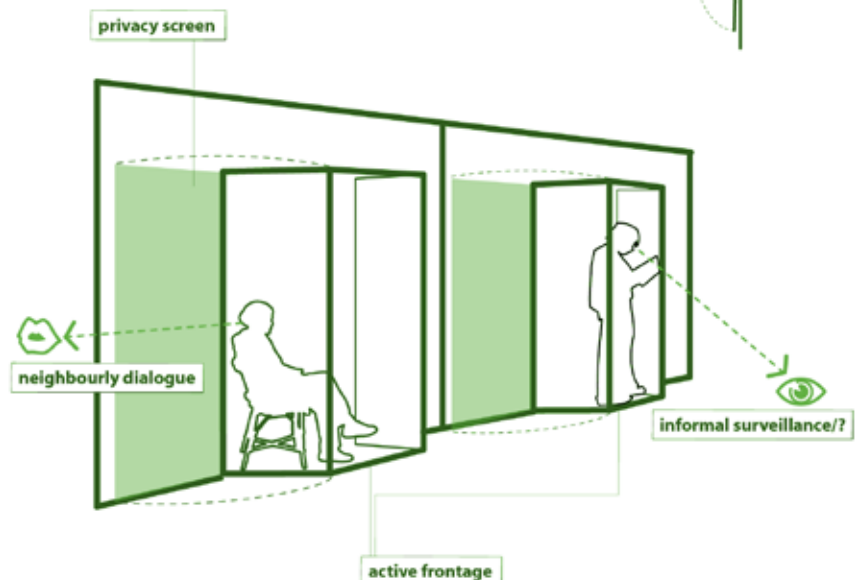
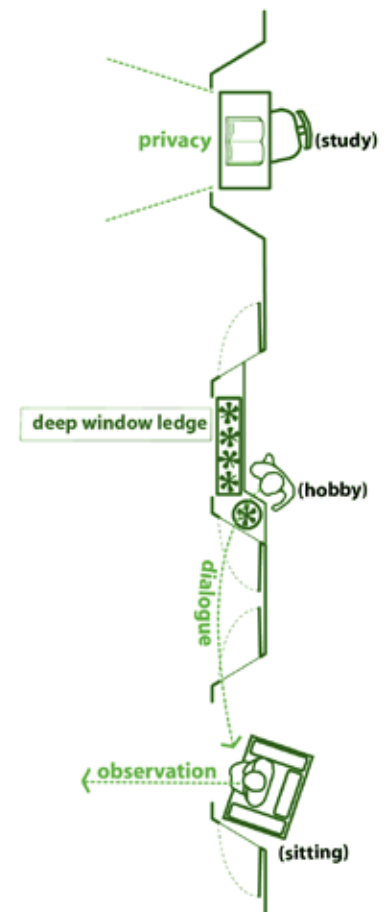
We will encourage developments in which public spaces have a positive interface with private surroundings based on principles of overlooking, visibility, active frontages and opportunities for informal social exchange if:

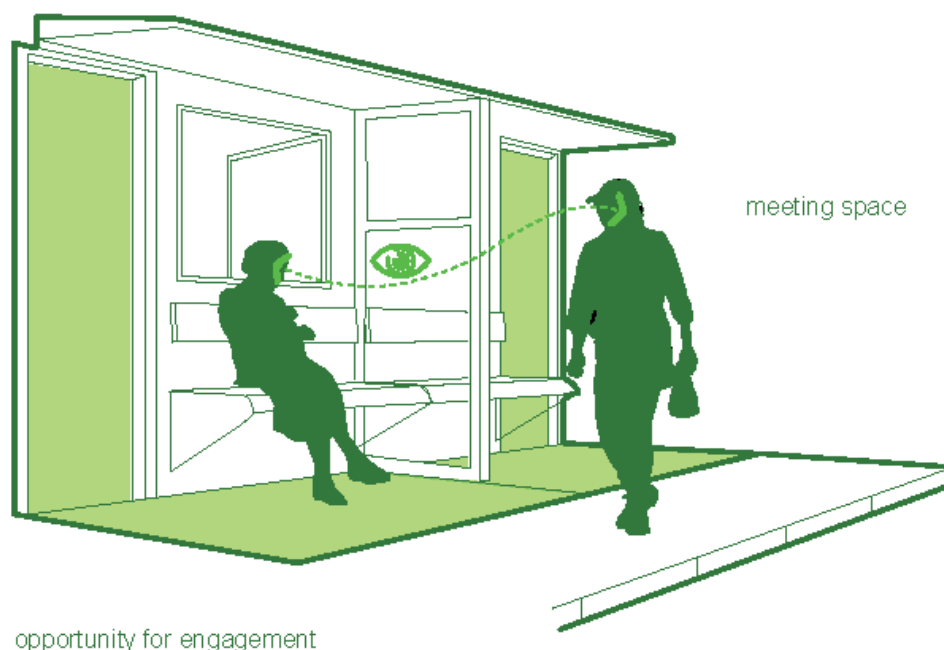
- all interfaces between new public spaces and private buildings are the subject of an integrated design approach based on Designing Streets and Housing Quality guidance
- proposals show how visibility and overlooking, active frontages, and opportunities for informal social exchange have been addressed and rigorously apply all key considerations and recommendations of the 'detail' section of 'Designing Streets' regarding street structure, street layout, and street detail
- development proposals set out physical boundary treatments, placing of entrances and positioning of internal building functions in relation to opportunities for overlooking and informal social surveillance rather than hard security arrangements
- all residential designs carefully consider entrances, dwelling layouts and boundary treatment and how these relate to the street or adjacent public space
- commercial buildings and workplaces, whether in mixed use areas or on business / industrial parks strive to maintain a positive relation to the public realm at pedestrian scale, by maintaining a regularity in building setbacks, entrances and other active functions facing the public realm and parking solutions
- building proposals are carefully considered and designed to create a sense of enclosure experienced in streets and other public spaces

JUSTIFICATION

As the public realm is instrumental in shaping the quality of life and vitality of the places in which we live, our connections to it - through our homes, places of work and leisure destinations - become a major consideration in establishing a distinctive quality for Energetica. For both private residences and workplaces across different typologies, a positive interface to the public realm is an integral part of setting the conditions for social exchange, safety, and an innovation culture. Across the Energetica corridor the key principle is that public spaces (streets, squares, footpaths, greens etc) should have a positive interface with private surroundings based on principles of visibility and overlooking, active frontages, and opportunities for informal social exchange.

Developments too often fail to create successful streets because buildings are designed without regard for the street they collectively define. The key principle is that in facilitating positive connections into the public realm from homes, places of work and other destinations, careful consideration must be given to both the strategic and the detailed design of this interface.





opportunity for engagement

THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- a good quality public realm facilitates valuable social exchange
- an integrated design approach that emphasises the creation of positive public-private interfaces as a mutually beneficial goal that will improve the quality and sense of place, whilst an improved quality of both private housing, workplaces and the adjacent public realm will be a factor in attracting people and firms to Scotland
- creation of retrofitting economy that will generate an increase in local small scale building work.
- lowered cost of living; reduced overheads though improved energy efficiency of the porch, lower insurance premiums, and higher rental incomes
- increase neighbourhood value; reduced crime increases desirability and hence value of area

Environment

- facilitating an enjoyable public realm through increased informal surveillance will help to encourage walking and cycling, will leading to a decrease in personal car use and as a consequence a reduction in pollution, noise nuisance and carbon emissions.
- reduced vehicle traffic and related emissions through incentivised incorporation of public transport, bicycle and pedestrian spaces
- opportunity to increase biodiversity with planted boundaries
- careful material choices reduce embodied energy whilst porous surfaces facilitate sustainable drainage measures
- potential to integrate recycling points along boundaries to ensure this becomes norm rather than exception

Quality of life

- increase neighbourliness through greater connection to and participation in immediate public realm
- improved environment due to reduced crime and antisocial behaviour through increased informal surveillance
- pleasant public spaces with defined boundaries and no areas to avoid
- an integrated design approach that balances the needs of public and private, with positive interfaces that foster sociability, will improve the quality of the sense of place
- increased informal surveillance will reduce opportunist crime and enhance public perception of safety

03 BUILT FORM

03.4 – MANAGED COMMON SPACE

M – SETTLEMENT

We will encourage developments which provide high quality communal spaces designed to facilitate a sense of shared ownership if:

- proposals include deliberate moves to orientate housing towards communal spaces – creating a positive relationship
- adequate and attractive public outdoor space is provided in line with the Scottish Housing Quality Standard, whilst encouraging the provision of high quality private outdoor space to exceed current space standards
- all dwellings have access to private outdoor amenity space such as gardens or balconies, as well as to a minimum amount of dedicated play space - residential units without gardens will have 10sqm play space in the direct vicinity



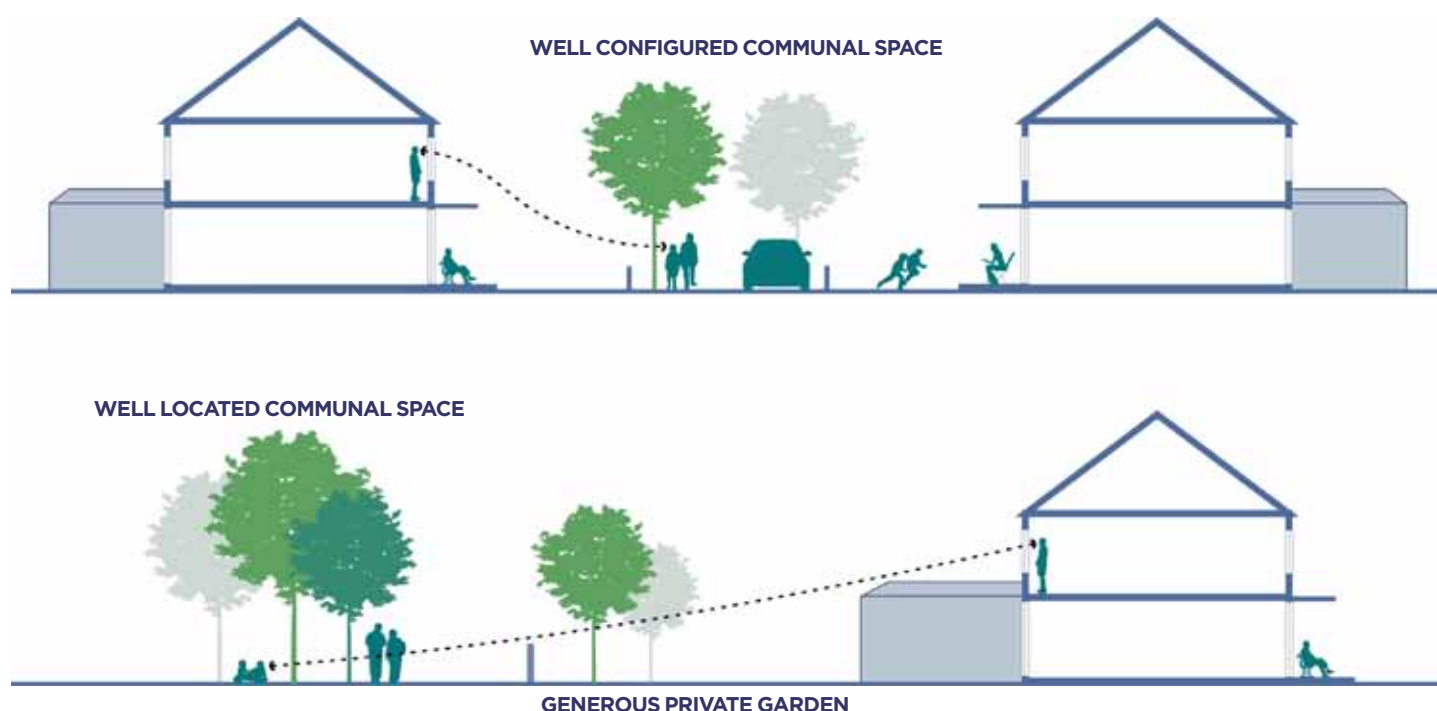
JUSTIFICATION

The Energetica Corridor strives to deliver high quality and desirable places for a broad spectrum of existing and future residents. Private outdoor space is particularly important for families, allowing young children secure areas for unsupervised play, whilst also highly valued to support diverse lifestyle needs and desires.

The key principle is that good quality private outdoor space will act as a key attractor in residential developments, and should be made a priority for both social rented & private properties alike.

HIGH QUALITY PRIVATE OUTDOOR SPACE EXCEEDING CURRENT STANDARDS





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- attractive private outdoor space adds value to properties and will attract talented people to the area.
- attractive and well used communal shared management facilitates are beneficial for social interaction.
- micro economies based around small scale growing of vegetables and other commodities, if larger communal spaces are carefully managed – e.g. an allotment cooperative.

Environment

- potential to increase biodiversity through both private planting and communal growing within outdoor spaces.
- sustainable management of drainage in developments if suitably porous surfaces are used.
- increased enjoyment of the outdoors raises awareness of environmental issues and increases likelihood of participation. in environmental projects - for example, removing litter, respecting planting, composting etc

Quality of life

- increase in homeowner quality as personal space is increased to accommodate broad range of lifestyle needs.
- increased perception of the value of community and a sense of place through well used and respected common space.
- promotion of healthy lifestyles through increased engagement in the landscape, for example through emphasis on edible landscapes
- common spaces are an effective tool for building collective efficacy. Spaces can start out as environments managed by others but responsibility for this can ultimately be devolved to a community group

03 BUILT FORM

03.5 – ADAPTABILITY AND FLEXIBILITY

M – SETTLEMENT, S – PLOT

We will encourage developments which provide flexibility, adaptability and the ability for neighbourhoods to change in the future if:

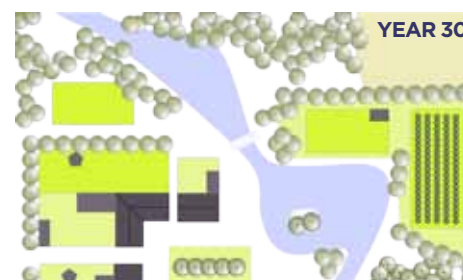
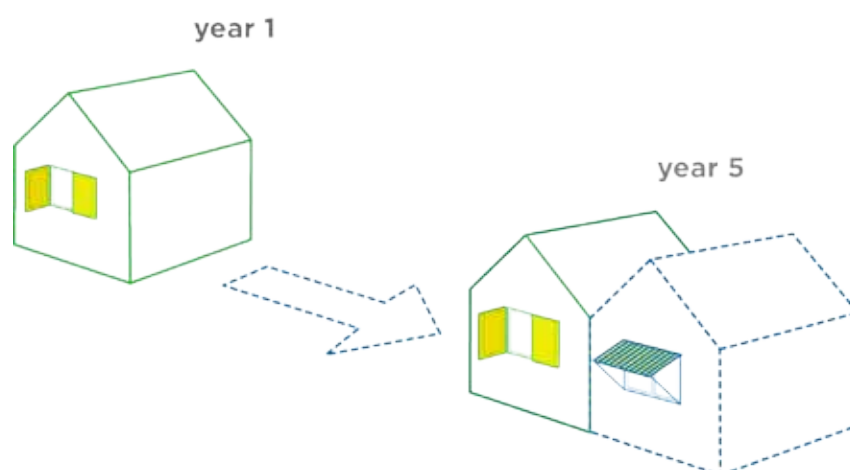
- developments include land not allocated for particular uses (un-programmed spaces) which could be built on or become community land at a later stage
- developments include plot sizes and housing typologies that can be adapted or extended
 - these loose-fit solutions ensure latent capacity for future adaptation as needs change or conditions develop

JUSTIFICATION

As the Energetica Corridor develops into a location with a strong innovation ethic which attracts and retains the talent that underpins this, there is potential to establish a unique regional identity and planning approach that emphasises the need for flexibility in physical form at all scales and which is permissive of dynamic change. The first key principle is that within a clearly defined regulatory framework, there should be freedom to implement every day, continuous and user-led innovation in the built environment.

The second key principle is that at plot level, enabling innovation through change and adaptation of dwellings within a well defined regulatory framework will enable homeowners to enhance and modify their personal environments as their circumstances change.

On individual plots within settlements, this means reducing restrictions on aesthetic regulation for individual buildings as long as core guidance regarding environmental performance and relationship with the public realm, as well as building regulations are met. This will act as a local attractor, creating a strong identity of user-led innovation whilst generating valuable additional social, economic and environmental benefits.





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- increase in homeowner value through individual effort - homeowners contribute to the value of their own homes
- creation of home-based enterprise space with no additional overheads to facilitate home-working and start-up businesses
- personal incomes potentially increased through home-based start-up business, enabling co-location of childcare and workspace
- lowered cost of living through reduced energy costs - retrofitting of environmental measures and/or adaptation/extensions that increase energy efficiency to reduce consumption
- lowered cost of housing
- local economic benefits through increase in small scale building work

Environment

- emphasis and incentives for using locally sourced materials and available skills to minimise carbon miles whilst promoting the regional context
- flexibility and policy support for retrofitting of environmentally beneficial measures, reducing energy consumption and/or generating locally from renewable sources
- reduced environmental impact, through lowered commuter traffic due to increase in home-working
- allowing individuals to modify their own homes based on environmental concerns such as insulating homes to reduce energy consumption

Quality of life

- increase homeowner quality; personal space increased to accommodate broader range of lifestyle needs:
 - a) home-working
 - b) hobby 'making' space
 - c) multi-generational living
 - d) children's Nursery
 - e) storage
- flexibility to adapt dwellings to support multi-generational living
- facilitate neighbourliness and local relationships as dwellings are modified to provide for long term needs, allowing families to remain rooted despite changes in circumstances
- generate increased sense of individual ownership and identity through personal adaptation / modification
- modifications to facilitate healthier lifestyles - for example storage of bicycles, provision of gym apparatus or sports equipment
- enhanced quality of life as settlements provide additional facilities through micro-adaptation; to cater for diverse lifestyles and improve work/life balance
- create resilient and strong community ties through adaptation of dwellings to meet needs rather than moving house



03 BUILT FORM
03.6 – HERITAGE AND REUSE OF EXISTING ASSETS

XL – CORRIDOR

We will encourage developments which maintain or enhance the built and natural heritage of the corridor including reuse of abandoned buildings or features, subject to other policies, if:

- development proposals demonstrate how they maintain or enhance the built and natural heritage assets of the area, or carry on the traditions that helped to create the distinctive landscape

JUSTIFICATION

The place qualities and identity of the Energetica corridor are key to its success in attracting businesses, residents and visitors. Much of the attraction of the area is related to its regional and territorial qualities.

This place distinctiveness derives from topography, coastline, vegetation and traditional building. The key principle is that new developments should adopt materials and species which maintain or enhance the heritage of the corridor especially including the reuse of abandoned buildings or features





THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- supporting the heritage and territorial assets of the corridor will support the local economy through food production, fuel crops and building materials
- supporting the heritage and territorial assets of the corridor will retain skills in agriculture, forestry, skills in stone construction and related countryside activities
- contributing to landscape as an asset instrumental in defining the character of the

Energetica corridor

Environment

- legible and permeable movement networks reduce car use and a decrease in pollution, noise nuisance and carbon emissions
- helping to produce convenient and pleasant environments which will increase walking and cycle use
- encouraging biodiversity and habitat creation
- enhancing the key landscape character areas

of the Energetica corridor

Quality of life

- encouraging the maintenance of the landscape either actively through care and production passively through recreation
- providing a canvas and opportunity for engagement in the landscape by families through community projects
- creating opportunities for process-driven greenspace development in which communities decide on the use of land according to their needs over time rather

03 BUILT FORM

03.7 – HOUSING SIZE AND SPACE STANDARDS

than fixing uses from the outset of the development

granny flat

S - PLOT

We will encourage developments which have minimum space standards that exceed Parker Morris standards by 15%, subject to other policies, if:

- residential developments have consistently larger rooms, additional rooms and higher standards of accommodation
- developments show how the concept of 'extra space' has been achieved, for example through:
 - a. a convertible garage
 - b. a generous landing that fits a desk
 - c. a balcony / winter garden which can be enclosed

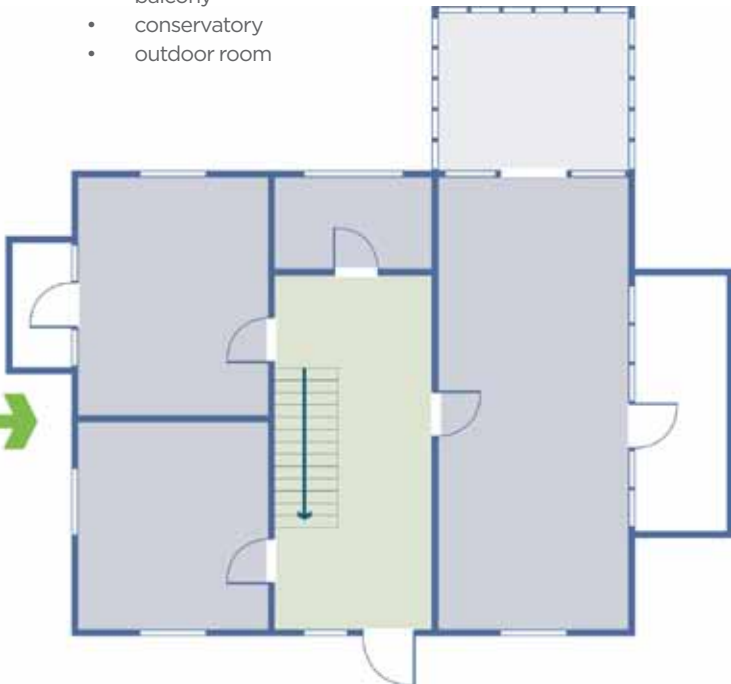
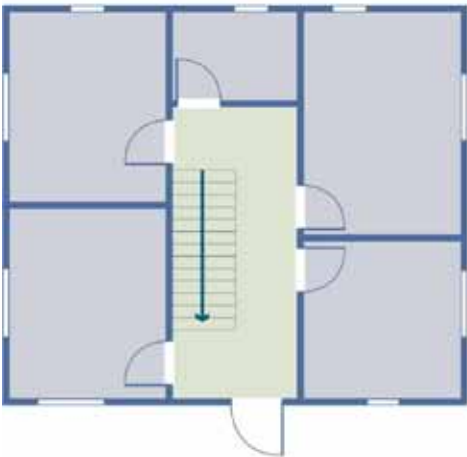
JUSTIFICATION

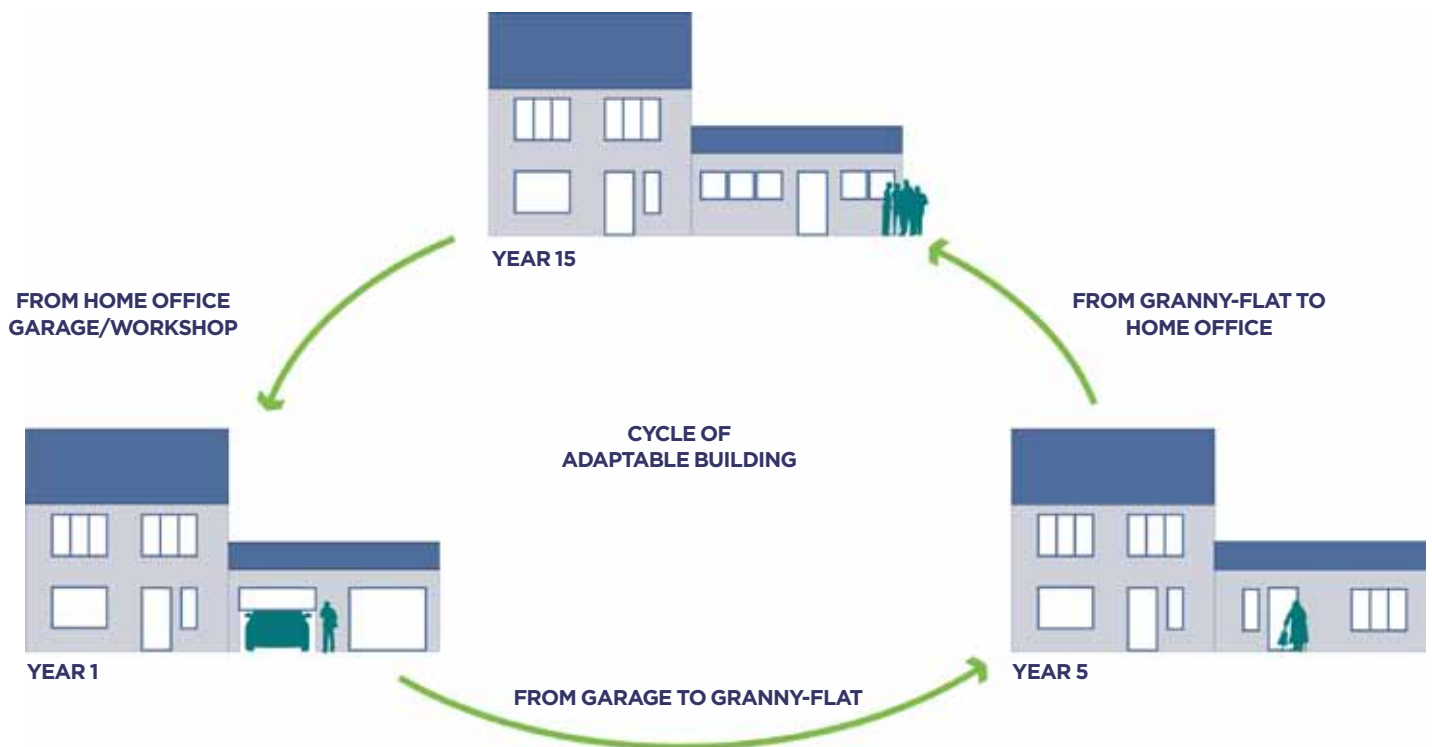
In addition to housing standards as advocated in PAN 67 which should be adhered to in general, the ability to use a home flexibly ensures an enhanced quality of life and individual opportunities, eg by creating an extra space in each house where children can do school studies or for work. The key principle is that the Energetica corridor will be a place where housing space requirements out-perform statutory minima and this will extend to all new housing stock either from the start or

HOUSE EXCEEDING MINMAL SPACE STANDARDS

- larger rooms
- bigger landing
- balcony
- conservatory
- outdoor room

TYPICAL MINIMAL HOUSE





by facilitating extensions during the life of the building.

THE POTENTIAL BENEFITS OF THIS REQUIREMENT INCLUDE:

Economy

- increased space standards promote home-working, set the conditions for innovation and growth of start-up businesses and

establish an aspirational Energetica style of living which attracts talent

Environment

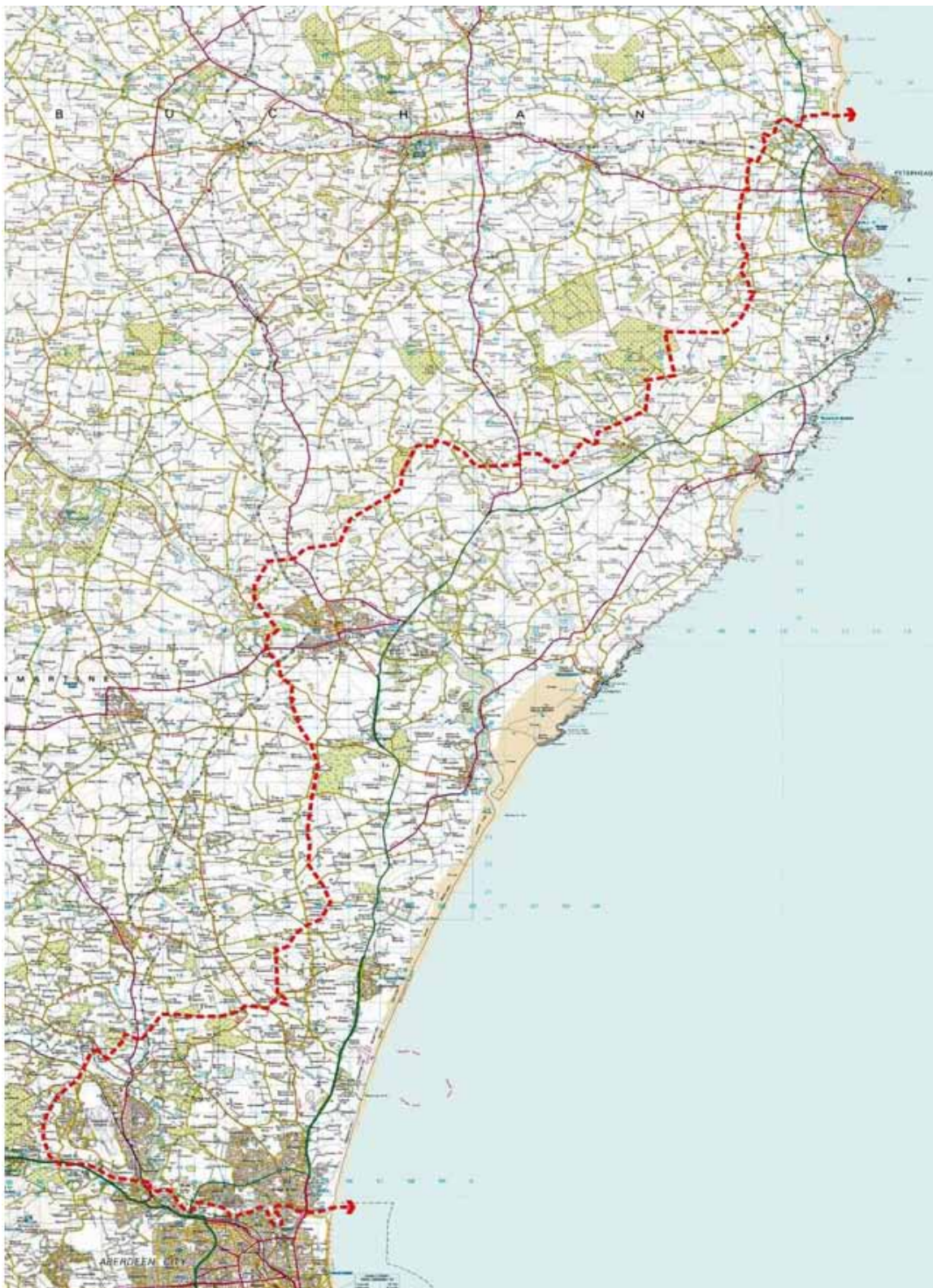
- facilitating home- working can reduce the need for travel

Quality of life

- increased space standards encourage mixed use neighbourhoods avoiding dormitory settlements, enhance safety and opportunities for social exchange

ENERGETICA PLACEMAKING SUPPLEMENTARY GUIDANCE

THE ENERGETICA FRAMEWORK AREA



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