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Land Use, Planning & Transportation Department,
South Dublin County Council,
County Hall, Tallaght, Dublin 24

16th February 2023

Additional Information
Planning Ref: SD22A/0372
February 2023

Regarding:	Reg. Ref. SD22A/0372
Applicant:	John Shenton & Margaret Hanlon
Development Description:	The development will consist of: Demolition of existing two storey detached dwelling house and outbuildings; Construct new purpose built three storey mixed used building with, a new physiotherapy practice, consisting of 5 consultation rooms, office space, staff areas as well as a rehab gym and studio area, all over two floors at ground and first floor levels; One bedroom apartment with own door access and dedicated private balcony area at the second floor level; 5 car parking spaces and secure bicycle parking parking for 6 bicycles all on site; Back lit signage to the front facade of the building; All associated site development works.
Location:	Saint Claires Villa, Lucan Road, Lucan, Co. Dublin, K78 X0N1.

A Dhuine Uaisle,

We have been appointed as consultant landscape architects on this project. This letter and its enclosures address various landscaping issues raised in the local authority's Request for Additional Information on Register Reference SD22A/0372 (AI Order 1470 requested on 22nd November 2022). Please refer to enclosed drawings, 6 no. copies, prepared by the landscape architects, as scheduled below, as part of our response.

Drawing No.	Drawing Title	Scale	Prepared By	Dwg Size
23_229-PDFI-01	Landscape Plan – Ground Level	1:200	Landscape Design Services	A3
23_229-PDFI-02	Landscape Plan – Roof Level	1:200	Landscape Design Services	A3

23_229-PDFI-03	Green Infrastructure Plan (Site Context Plan & Analysis)	1:2500; 1:1000	Landscape Design Services	A3
23_229-PDFI-04	Green Infrastructure Plan (Protection, Enhancement & Restoration Proposals)	1:100	Landscape Design Services	A3
23_229-PDFI-05	Green-Roofed Cycle Shelter & Green-Roofed Bin Store	NTS, 1:100	Landscape Design Services	A3

1) Response to AI Decision Order 1470, Item no. 1

"1. The Applicant is requested to provide a complete set of revised site layout, plan, sectional and elevational drawings demonstrating the following amendments:
(i) A more appropriate site layout plan with a car parking arrangement which would not result in unsafe vehicular movements which would cause a pedestrian or traffic safety hazard.
(ii) In re-designing the layout of the proposed development, the Applicant should make every effort to retain as much of the low stone wall as possible to negate the visual impact on the streetscape.
(iii) Having regard to the clear policy narrative within the Development Plan 2022-2028 to include energy efficient measures and green infrastructure in new buildings, the Applicant should provide. revised drawings which indicate the inclusion of measures such as green roofs and Photovoltaic panels."

LDS Response: The design team has evolved the site plan and proposals to include a more appropriate site layout plan to respond to the concerns raised by the local authority, particularly in relation to retention of the existing low stone wall addressing the public realm, and the inclusion of various green roofs (to the proposed building itself, to the cycle shelter, and to a bin shelter).

The architect has developed the design in order to retain much of the existing coursed random rubble limestone boundary wall to the front of the development along the Lucan Road. It is intended to clean off the ivy currently covering the capping of this wall, to 'make good' as required using a stonemason, to clean out the stone-work joints, and to re-point with a lime-based mortar. Where required, a new pier will be constructed to match the existing so that the vernacular character of the wall.

2) Response to AI Decision Order 1470, Item no. 5

"5. (i) The Applicant is requested to submit a drawing showing additional surface water attenuation for proposed development. Additional attenuation shall be by means of SuDS (Sustainable Drainage Systems).
(ii) The applicant is required to submit a revised drawing and report showing additional surface water attenuation provided by means of SuDS (Sustainable Drainage Systems) to include:
a) Above ground natural multifunctional (amenity, biodiversity, water treatment/quality and attenuation) sustainable natural drainage solutions such as blue/green roofs, permeable pavement, bioretention areas, rain gardens, filter drains, swales, bioretention tree pits.
b) Demonstrate the biodiversity value of SuDS - especially important given the site is in a Primary Green Corridor and next to a Core area.
c) Existing and modified flows.
d) Detailed design of SUDs features showing how they work.
e) A comprehensive SUDS management Plan to demonstrate that the proposed SUDS features have reduced the rate of run off into the existing surface water drainage.
f) Landscape and drainage proposals to be consistent in SuDS proposals."

LDS Response: The local authority is referred to the civil engineering drawings for a comprehensive illustration overview of the team design response to this item. The landscape drawings illustrate the civil

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engineering layouts as provided to us, in the background, to show the impacts of drainage proposals on landscape proposals. The design team has reviewed the submission and identified possible areas where we can improve the performance of the design in relation to issues raised by the local authority in the above AI item. These measures are outlined below from a landscape perspective, but again the reviewer is referred to the civil engineering drawings and reports for a detailed response to this item.

a) Permeable paving: The design team has provided 'flexible-base' construction permeable paving throughout the development (except at the site entrance area where vehicles will be using axle-turning movements, which has a deleterious effect on permeable paving block units). There, we have proposed that the paving comprise a 'bound-base' construction, with locally-sourced salvaged stone setts or cobbles laid in a bound or 'slurry' bedding layer. Surface water drainage from this area can be 'sheet-drained' using a cross-fall to an adjacent 'rain-garden' type planter bed and permeably-paved vehicle parking area, and to a new channel drain laid at the site entrance to drain into the 'rain-garden' planter bed. Using salvaged or recycled materials such as durable natural stone setts is a positive circular economy design principle and measure in construction.

Permeable paving measures specified in the developed design include the following:

- To pedestrian areas: a locally-sourced pre-cast concrete paving unit, 'Pembroke' by Kilsaran, laid with 'SUDSFlow' proprietary joint spacers. This paving unit is A-rated in accordance with the Green Guide Specification Edition 4, A+ rated when used with a prepared recycled sub-base.
- To car-parking areas: a 100% free-draining honeycomb UV-stable polypropylene gravel stabilisation grid; this grid to contain at least 30% recycled plastic content, to retain locally-sourced angular gravel aggregates, 6-10mm single size e.g., 'Ballylusk'. This paving build-up must be suitable to be trafficked with wheelchairs, mobility devices and buggies.

b) Green Roofs: The detail design has been developed to identify areas suitable for an 'extensive' type green roof build-up (sedum roof type, 30-40mm depth sedum blanket on 80mm depth low-nutrient growing medium on 40mm depth drainage layer) and a 'semi-intensive' type green roof (bio-diverse roof type, with plug plants planted into a 150mm depth growing layer on a drainage layer)
   - 'Extensive' type green roofs have been located on the south-facing aspects of the proposed building to ensure their healthy establishment; t the first-floor roof level, adjacent to the apartment's private open space balcony; and the development's roof level. Safe access for maintenance and occasional watering has been considered by the architect and provided for.
   - 'Semi-intensive' type green roofs have been provided to the cycle shelter at the front of the development, facing south, and to a 3 bin-shelter located beside it.

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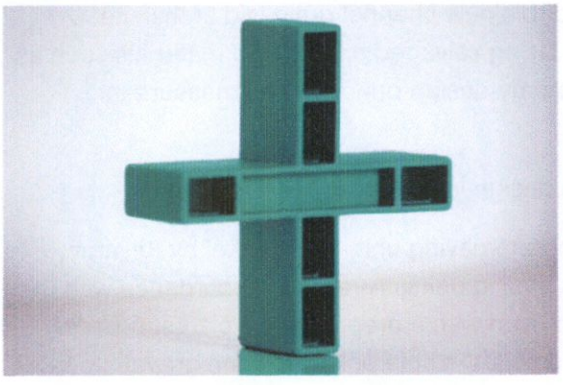
Figure 1. Pre-cast concrete unit paving, laid with proprietary spacers. *Figure 2. 'Nidagravel' grid filled with angular gravel*



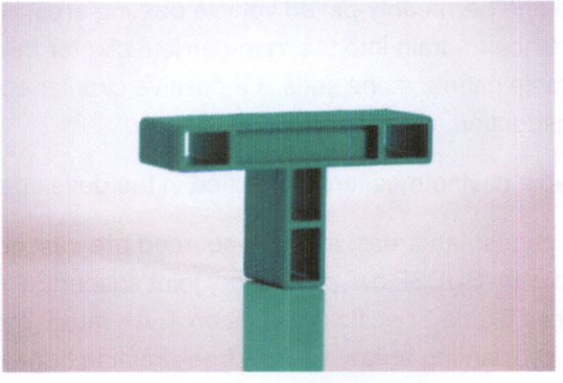
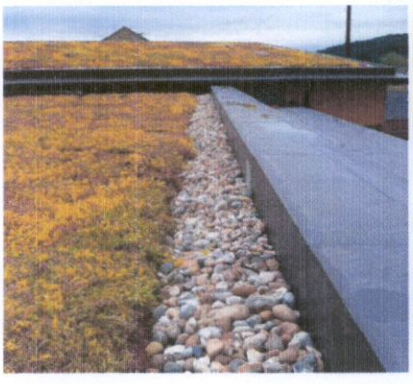


Figure 3. Proprietary paving spacers by SUDSFlow which can be used to make traditional paving 'permeable'



Figures 4-6. View of typical extensive 'sedum' roof; view of green-roofed cycle shelter by GreenRoofSheltersUK; and view of green-roofed bin shelter by FrontYardCompanyUK

c) Rain garden planter bed: We have identified a small planter bed near the public realm as being suitable for design as a simple rain-garden, with a 200mm deep depression or 'free-board' in the centre of the planter bed to detain surface water temporarily during cloud-burst events of rain.
   - We have specified 'tough' planting to this planter bed which can tolerate temporary inundation, such as ornamental grasses, strap-leaved flowering perennials, ferns, and bulbs.

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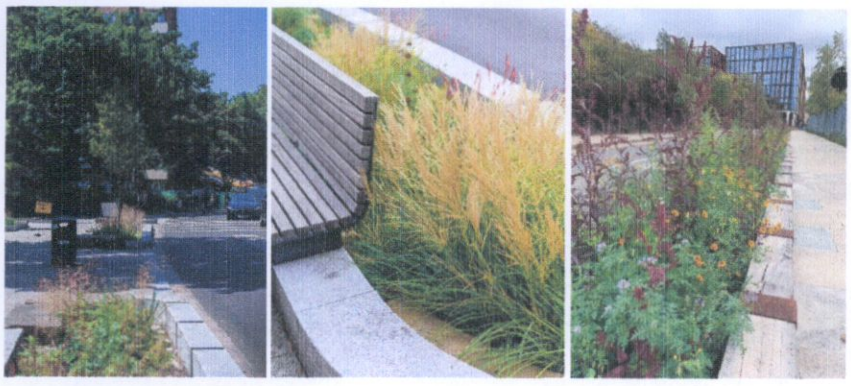
- 'Resilient' tree planting of a single large native evergreen Scot's Pine *Pinus sylvestris*, has been provided to the planter, with climate-resilient *Betula nigra* River Birch surrounding it.
- Detailed with bio-retention type soils and gravel filtration layers, rain-gardens can help to collect run-off from buildings and paving and detain it temporarily to filter through specialised soils. This improves the quality of the water leaving the system, thereby alleviating the pressure on downstream water treatment facilities.

Figures 7-10. Imagery of trees and large shrubs selected for the planting palette at the site



Figures 11-13. Image of simple rain gardens and typical planting, by Robert Bray Associates landscape architects

3) Response to AI Decision Order 1470, Item no. 6

"6. The applicant shall submit and agree a comprehensive landscape and green infrastructure plan with SDCC Public Realm Section. The landscape and green infrastructure proposals shall include:
i) A Green Infrastructure Plan, which may consist of a simple landscape plan that includes objectives to protect or restore existing on site GI assets, provides for connection to local or primary GI corridors or includes elements which allow the site to act as a local stepping stone.

a) The Green Infrastructure Plans shall include:
- *Site location plan showing the development site in the context of the wider GI as shown on the Council's GI Plan for the County;*
- *Site survey and analysis, identifying existing GI Infrastructure and key assets within the site;*
- *Indicate how the development proposals link to and enhance the wider GI Network of the County;*
- *Proposed GI protection, enhancement, and restoration proposals as part of the landscape plan, where appropriate, for the site.*

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ii) A Landscape Plan to scale of not less than 1:500 showing –

a) The species, variety, number, size, and locations of all proposed planting.
b) Details of Hard landscape works, specifying surface material.
c) (Natural) SuDs features such as blue/green roofs, permeable pavement, bioretention areas, rain gardens, filter drains, swales, bioretention tree pits.
d) Details of (natural) SuDs features showing how they work.
e) Detailed Sections and Elevations

iii) Planting material where possible should be native and/or pollinator friendly Irish Grown Nursey Stock. The importation of foreign planting material should be avoided within the proposed planting scheme. Trees to be minimum 18-20cmg at planting."

LDS Response:

3.1 Green Infrastructure (Site Context & Analysis): Our GI site survey and analysis has been informed by information gleaned from a desk study review of *'Map 13 Green Infrastructure'*, prepared by the Land Use Planning and Transportation Department of South Dublin County Council; *'Figure A 4.1 Green Infrastructure Strategy Map'*, forming part of South Dublin County Council's County Development Plan 2022-2028; Chapter 4 *'Green Infrastructure'* of the CDP itself; remote viewing of OS aerial photography; and a site survey walk-about to better understand the receiving environment, habitats etc. This site survey and analysis mapping process has been illustrated in a contextual supporting drawing, *'Green Infrastructure Plan (Site Context Plan & Analysis)'*.

The subject site is in the town of Lucan, south of the County Boundary between South Dublin and Fingal, and close to the Core area of the Liffey Valley itself (the river is within a 300.00m radius of the subject site). This is identified as a Primary GI Corridor (ref. Figure A 4.1 *'Green Infrastructure Strategy Map'*, SDCC CDP 2022-2028). The site's location and immediate context encompasses a range of habitats, from river valley and woodland habitats to urban and peri-urban.

As the subject site is located within or close to a Core or Corridor (the Liffey River Valley, Fingal and Dublin GI Corridors) the development should, at a minimum, protect any existing GI assets and enhance same (for example, not breaking a GI Corridor but enhancing same with a connecting piece of planting, retaining hedgerows or woodlands).

3.2 'Site Summary' of Existing Vegetation: Existing trees are being removed at the site (refer to project arborist's tree survey report and drawings) to accommodate the development proposals. These trees are of limited value; seven no. existing trees (all of which are proposed to be felled because of the impacts of the development) were observed on site by the consulting arborist. Please refer to the arborist's tree survey and arboricultural impact assessment reports and drawings for information on existing vegetation.

All seven trees are Category C in the opinion of the consulting arborist, meaning trees of low quality. Existing tree species noted on site by the arborist include Juniper, Lawson Cypress, Ash, Apple, and Cherry.

The submitted proposed landscape plan for your consideration illustrates five no. proposed feathered/clear-stemmed trees with four no. multi-stemmed trees (nine trees in total) as mitigation

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planting for the seven no. felled trees. Hedgerow planting of container-grown Hornbeam plants has been proposed along the public realm site boundary behind the retained stone wall.

3.3 Green Infrastructure (Protection, Enhancement & Restoration): The development is a 'small-scale development' in terms of the SDCC CDP. Our team's GI and landscape strategy has been aligned with the CDP's policies and objectives to:

- to consider objectives to protect or restore existing on-site GI assets.
- to provide for connection to local or primary GI corridors.
- to include elements which allow the site to act as a local stepping stone.

The GI measures chosen by the team in design development to respond to the matters raised in the AI have been informed by the non-exhaustive list of alternative GI interventions contained in the CDP, to resolve difficulties where an applicant or developer may find difficulties in meeting GI objectives due to site-specific constraints, such as the following:

- *"the use of natural features such as woodland, hedgerows, trees, water courses, ponds and grasslands or other natural methods to strengthen GI assets and provide connections to the wider GI network*
- *the incorporation of nature-based solutions such as SuDS schemes, permeable paving, green and blue roofs, green walls, swales, SuDS tree pits, rain gardens, ponds to support local biodiversity and mitigate potentially harmful effects of development*
- *the provision of new native tree and plant species as well as pollinator-friendly species within developments, consistent with the National Pollinator Plan*
- *Where possible, no net loss of existing trees/hedgerows on site*
- *The provision of bird boxes (as building facades for nesting sparrows or swift brick), bat boxes, hedgehog passes, and other wildlife interventions as required in landscape settings*
- *The provision of bee bricks in new development*
- *The retention of heritage features such as old walls, bridges and so on, that have habitat value*
- *The provision of allotments/orchards for residents to grow fruits and vegetables*
- *Use of recycled/upcycled or locally sourced natural materials within the development*"

Our drawing '*Green Infrastructure Plan (Protection, Enhancement & Restoration Proposals)*' illustrates the various measures the design team has undertaken at FI stage to respond to the issues raised by the local authority in relation to GI, which include the following:

- 'extensive' type sedum roofs in areas of the roofs not subject to shade (i.e., not north-facing)
- 'semi-intensive' bio-diverse, green-roofed cycle shelter ('8x Cycle Shelter' by GreenRoofSheltersUK' or equivalent approved) with wildlife and habitat panels, flowers in bloom from April to November and early spring bulbs, dried and rotting logs. This cycle structure is made from primarily reclaimed, re-used or recycled materials including steel, with habitat panels made from a mix of found materials for invertebrate nesting and over-wintering and growing substrates made from recycled secondary waste with a low nutrient level. Timber cladding is FSC-certified new European softwood. Plants and plugs are certified by FloraLocale.
- 'semi-intensive' green-roofed aluminium frame 3-bin shelter ('Bin Dock Triple' by FrontYardCompanyUK or equivalent approved) with integrated FSC larch posts and climbing plant wires.

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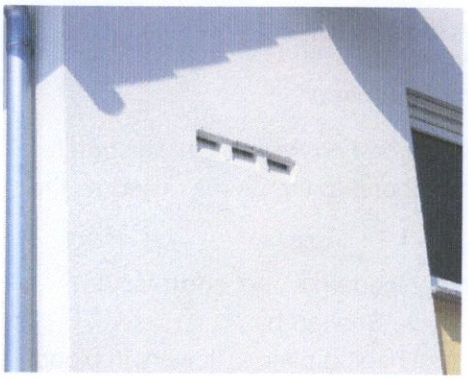
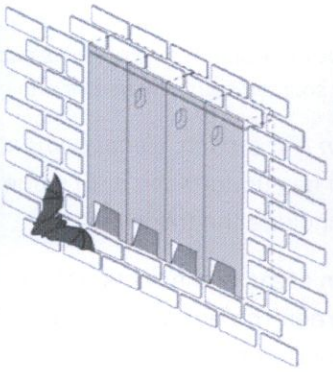
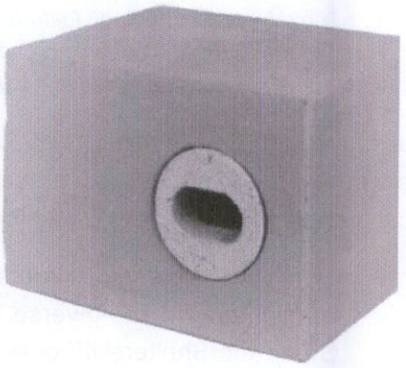
- retention of existing old limestone walls (coursed, random rubble) along the street-frontage, with 'making good' measures as required, once the ivy cover has been removed and visual inspection can be undertaken. Remedial works if any must be in order with appropriate conservation practices, including re-pointing with a lime-based mortar to match the existing, and the construction of new end-piers to the retained elements, which reflect the construction and detail of existing piers to the pedestrian gates currently forming the site entrance. The new piers to flank the proposed vehicular entrance must be constructed of salvaged stone from demolished parts of the wall, or limestone sourced to match the existing.
- integration of bat-boxes and swift boxes into the walls of the proposed building as illustrated on the architect's drawings, and a bird/bat-box hung from the Scot's Pine tree in the rain-garden planter bed.
- planting of pollinator-friendly trees, min. 18-20cmg in size, grown in Ireland. Trees specified have been chosen for their climate-resilient properties, such as a location in a simple rain-garden planter bed (*Pinus sylvestris spp*) and *Betula nigra*, which has chosen for its resilience in an expected 2° temperature increase by 2050
- planting of Hornbeam boundary hedges that retain leaf cover during the winter to preserve shelter habitat for wildlife during the cold winter months. Hornbeam is 'naturalised' in Ireland.[1]
- permeable paving generally (flexibly-laid construction), with salvaged stone setts (bound construction) in vehicle manoeuvring areas (positive circular economy principle)
- a small rain-garden planter bed with appropriate moisture-tolerant plants
- amenity planter beds planted with Irish nursery-grown pollinator-friendly plants including ornamental grasses, bulbs, flowering perennials, and decorative multi-stemmed trees which should establish quickly and require little maintenance.







Figures 14-15. 3 no. combined bat brick tubes ('2FR' multiple bat tubes by Schwegler) installed on rear elevation of proposed building, refer to architect's drawings of rear elevation; Figure 16 'Brick Box Type 25' for installation on rear elevation of building to accommodate swifts (3 no.)

[1] Naturalisation is an ecological phenomenon through which a species, taxon or population of 'exotic' (as opposed to native) origin integrates into a given ecosystem, becoming capable of reproducing and growing in it, and proceeds to disseminate spontaneously. In some instances, the presence of a species in a given ecosystem is so ancient that it cannot be presupposed whether it is native or introduced.

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Generally, the planting palette rationale has been to concentrate on the planting of pollinator-friendly trees min. 18-20cmg in size and decorative multi-stemmed trees, all to have been grown in an Irish nursery. The trees specified have been chosen for their climate-resilient properties, such as a native moisture-tolerant indigenous conifer in a rain garden (*Pinus sylvestris spp*) and pollinator-friendly *Betula nigra*, which has been chosen for its resilience in an expected 2° temperature increase by 2050.

Similarly planting stock for container-grown plants and bulbs in amenity planter beds has been specified as pollinator-friendly, low-maintenance plants, which should establish easily and help absorb cloud-burst rain events, detaining and absorbing water on site. All planting stock has been specified as Irish nursery-grown pollinator-friendly plants in the supporting outline landscape specification keys shown on the landscape drawings. Please note that we have omitted Ash from our planting proposals because of the presence of Ash Die-Back Disease in Ireland, and the advice from the Forest Service/the Department of Agriculture that it is likely that young ash plants for planting are the highest risk pathway for spread of this disease into Ireland.

We have noted in our landscape key that appropriate Plant Passports should be provided for new tree planting. All the proposed new trees are selected with their mature size, shape, and form in mind, and specified to be grown in an Irish nursery. This is a decision based on sustainability principles as long-term maintenance and pruning is kept to a minimum. Native species have been primarily specified because of their speed of establishment and biodiversity potential.

4. Landscape Architect

We confirm that Landscape Design Services is a fully-qualified Landscape Architectural design practice, and that the staff designated to work on this project are suitably qualified and competent.

i. Colm Kenny is a Registered Landscape Architect Member of the ILI (the Irish Landscape Institute, the professional institute for landscape architects in Ireland); a Registered Surveyor member of the SCS (Society of Chartered Surveyors of Ireland, the professional institute for quantity surveyors in Ireland), and a Chartered Quantity Surveryor member of the RICS (Royal Institution of Chartered Surveyors). Colm has over 10 years experience in Quantity Surveying having worked as a Senior QS in a number of Dublin Cost Consultancies, and over 15 years experience in all stages of landscape design and construction for both hard and soft landscape schemes.
ii. Joanne Coughlan is a Registered Architect member of the RIAI (the Royal Institute of Architects Ireland) and a qualified Landscape Architect member of the ILI (Irish Landscape Institute), with 18 years' post-qualification professional practice and practical experience in architectural and landscape design.

We are available to meet or speak with you at your convenience to discuss the above if required. We trust that you find the above submission and accompanying drawings in order and await acknowledgement of this Additional Information to the Planning Application Reg. Ref. SD22A/0372 in due course.

Is mise le meas,

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Joanne Coughlan

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For and on behalf of **Landscape Design Services**

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